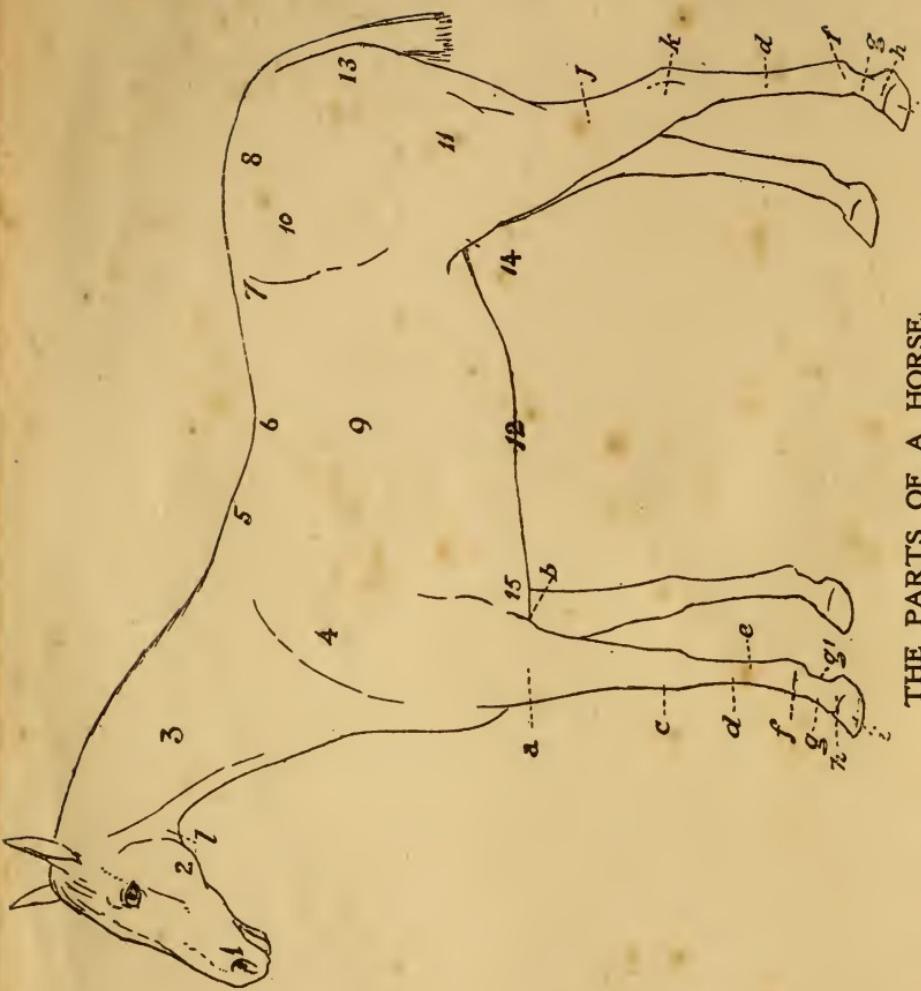


HORSE BUYING AND MANAGEMENT.

A 84 1/2

### THE PARTS OF A HORSE.

1, Nose; 2, Branch of Lower Jaw; 3, Neck; 4, Shoulder; 5, Withers; 6, Back; 7, Loins; 8, Croup; 9, Ribs; 10, Point of Hip; 11, Thigh; 12, Belly; 13, Point of Buttock; 14, Stifle Joint; 15, Brisket; *a*, Fore-arm; *b*, Elbow; *c*, Knee; *d*, Cannon-bone; *e*, Back Tendons; *f*, Fetlock; *g*, Pastern; *h*, Hollow of Pastern; *i*, Coronet; *j*, Gaskin; *k*, Hock-joint; *l*, Larynx.



# **Horse Buying - -**

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# **and Management:**

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A HANDBOOK FOR THE USE  
OF AMATEURS.

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BY

HENRY E. FAWCUS.

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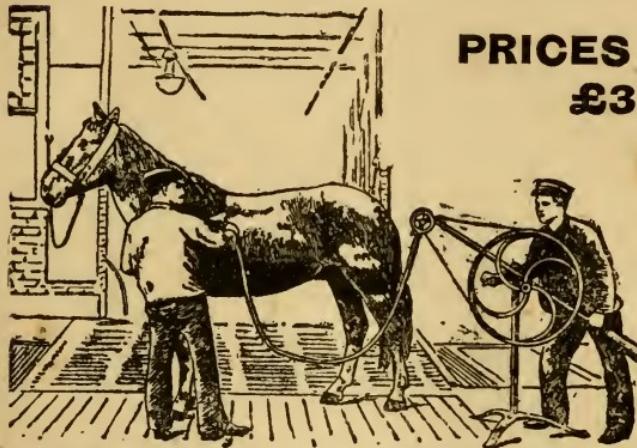


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## PREFACE.

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THE unsatisfactory condition which obtains in most cases where the purchase of a horse is contemplated—viz., the necessity of relying upon the advice of one's coachman or groom, or upon that of some other person, very possibly incompetent, and frequently not disinterested—suggests that a work which aims at enabling the amateur to buy his own horse, by instructing him what to look out for and what to avoid, would be really acceptable to a very wide public, and save many a man the annoyance of paying a long price for an inferior animal.

The usual defects and weaknesses that horseflesh is heir to are carefully enumerated in this little book, and the reader is clearly taught where to look for them and how to detect them. In addition to this negative protection, the intending purchaser is shown what points he should particularly look for, according to the use to which the horse is to be put; and general directions are given for his guidance in deciding whether to buy or reject an animal that may appear to be a suitable one for his purposes.

Practical hints and instruction on the proper management of the horse, in order to keep him in good health and working condition, complete a work which should prove of great assistance to the amateur horse-owner in the difficulties with which he has to contend.

It is not within the scheme of this book to deal with diseases, but if such information be required, it will be found in Dalziel's "Diseases of Horses: Their Causes, Symptoms, and Treatment" (1s.), issued by the publisher of this little work.

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# HORSE BUYING AND MANAGEMENT.

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## PART I.—BUYING.

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### CHAPTER I.

#### DETERMINATION OF AGE BY TEETH.

As the value of all horses—provided they are sound—is to a great extent dependent upon their age, one of the first things to do in inspecting an animal that appears to suit the requirements of an intending purchaser is to ascertain its age. This may readily be done by examining the incisor (or front) teeth, from the appearance of which the horse's age may be pretty accurately told until he is eight years old. After he has reached that age it becomes a more difficult matter to say exactly how old an animal is; but as it is inadvisable to buy an "aged" horse—all horses older than eight years are termed "aged"—unless the intending purchaser should personally know his previous history, this fact is of little practical consequence.

It is often assumed that it is a difficult matter to tell the age of a horse by his teeth, but in reality it is a very easy thing, and the necessary knowledge can readily be acquired by any amateur.

The system of judging the age of a horse by his teeth is based primarily on two factors: First, that young horses have so-called milk-teeth, which gradually and in regular order become replaced by permanent ones; and secondly, that the latter possess dark-coloured marks in the centre of their "tables," or cutting-surfaces, which are gradually obliterated by wear.

A horse has twelve incisor teeth—six in the lower, and six in the upper jaw. The milk-incisors differ considerably from the permanent ones, being much smaller, white, and having no groove down the centre of the external face—*i.e.*, that part of the tooth which is visible when the upper and lower incisors are in apposition with one another, and the lips are parted. The permanent incisors are larger and broader than the milk-incisors, being also darker, and having a vertical groove down the centre of their external face. It is very easy for a novice to learn the distinction between milk and permanent incisors by looking at the mouth of a three- or four-year-old horse, in which both kinds of incisor teeth are to be seen. Once this difference has been noted and seen, it should not be possible to confuse a young horse in possession of all his milk incisors with a mature horse in which these have been replaced by permanent teeth. Unless the buyer is cognisant of the difference between these two kinds of incisors, it may happen that he will mistake a two-year-old animal for a five-year-old.

The six incisor teeth in both the upper and the lower jaw are divided into the central incisors, the lateral incisors, and the corner incisors. The two teeth in the middle of the row of incisors are the centrals; on either side of the centrals there is a lateral tooth; whilst the outside tooth at either end of the row is a corner incisor.

It is not necessary for our purpose to allude to the changes in the teeth of horses less than two years old. At two years young horses have the full number of milk-incisors (Fig. 1). During the succeeding year (usually when two-and-a-half years old) the central

incisors are replaced by permanent ones, which are well developed when the animal is three years old. A three-year-old horse, then, has two permanent central incisors, whilst the lateral and corner incisors are milk-

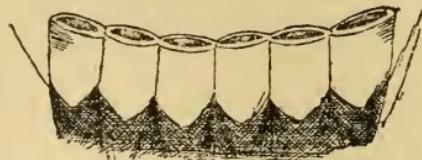


FIG. 1.—TWO YEARS OLD.

teeth. As these two kinds of teeth present a readily recognised contrast (Fig. 2), as pointed out above, it is impossible to mistake a three-year-old for an older horse.



FIG. 2.—THREE YEARS OLD.

During the fourth year (usually at three-and-a-half years) the lateral milk-incisors are replaced by permanent ones, these being fully developed when the horse is four years old. A four-year-old, therefore,

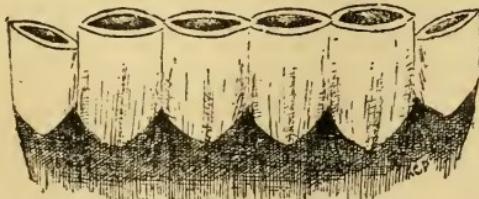


FIG. 3.—FOUR YEARS OLD.

has permanent central and lateral incisors, but the corner incisors are still milk-teeth (Fig. 3). These last are replaced by permanent corner incisors at about

four-and-a-half years old, which are well up at five years old. A five-year-old animal thus is in possession of all his permanent incisors, and has lost all milk-incisors (Fig. 4).

Up to five years old we ascertain the age by the respective number of milk and permanent incisor

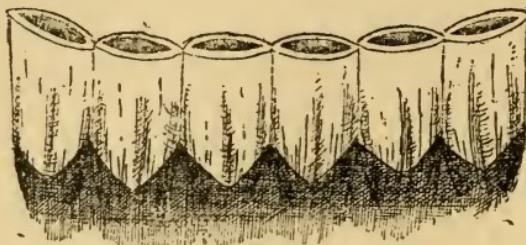


FIG. 4.—FIVE YEARS OLD.

teeth. After that, and until a horse becomes "aged," we go by the black or dark-coloured marks in the tables of the incisors of the lower jaw. These marks gradually become obliterated by wear—usually on the completion of about three years after the appearance of the permanent incisors in the lower jaw. At six years old, therefore, the marks in the centrals are more or less obliterated, whilst they are plainly visible in the laterals and corner incisors (Fig. 5). At seven years old, the marks in the laterals are disappearing,

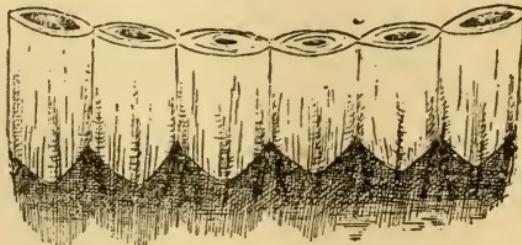


FIG. 5.—SIX YEARS OLD.

and have wholly disappeared in the centrals, but are quite distinct in the corner teeth (Fig. 6). When the horse is eight years old, the marks are becoming obliterated in the corner incisors, whilst they are alto-

gether obliterated in the laterals as well as the centrals. At nine years, the marks have disappeared from all the incisors; hence it is not possible to tell the age after the horse is eight years old by the marks.

The marks in the teeth of the upper jaw disappear much later than those in the corresponding incisors of the lower jaw; hence the former should not be taken as a guide.

Although the rate of wear of the marks varies somewhat in different horses, yet for all practical purposes the above indications serve as a satisfactory guide in telling the age of an animal.

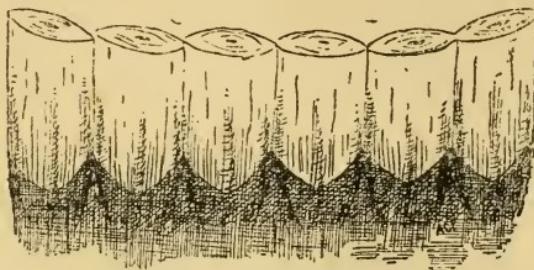


FIG. 6.—SEVEN YEARS OLD.

An old horse may readily be recognised simply by parting his lips, when the incisor teeth in both jaws, but especially in the lower jaw, will be found to stand out from the jaw obliquely or slantingly. In younger horses, the teeth appear more or less upright in the jaw. This difference in the position of the incisors is very marked, and once seen is easily remembered. All that is necessary in order to gain this knowledge is to examine the mouth of a five- or six-year-old horse and that of one which is twelve years or more, and to compare the two.

In the case of geldings, the tushes also serve as a rough indication of an animal's age. These are the pointed teeth visible a short distance behind the corner incisors; they are as a rule not present in mares. The tushes are permanent teeth, and the age at which they appear varies somewhat in different horses. As a general rule, it may be taken that they make their

appearance when the horse is between four and five years old. Up to about six years they are pointed; but with each succeeding year more and more of the point is worn away, and the tushes become blunter.

In order to inspect the state of the incisor teeth properly, some dexterity—which may rapidly be acquired by practice—is necessary in the case of those horses that do not like being handled about the mouth or head. The best way of getting a good view of the tables of the incisors is by pulling out the tongue of the horse and keeping it drawn out, which prevents him from closing his mouth. In doing this the person who is examining the horse should stand on the near (left) side, and insert the fingers of his right hand into the mouth on the left side, at that part which lies between the corner incisor tooth or the tush (if present) and the corner of the mouth. This part is free from teeth, and consequently the fingers cannot be bitten. The tongue can readily be grasped and pulled out, causing the horse to open his mouth. The lower lip should be pushed downwards with the fingers of the left hand in order to obtain a good view of the tables of the lower incisors. In many cases it will not be necessary to pull out the tongue, if the horse will allow his mouth to be kept open without doing so.

When horses are very shy about their heads being touched, and difficulty is experienced in getting the mouth open, they should be quietly patted and gentled, when after a time they will submit to having their teeth examined. In no case should such horses be roughly handled or spoken to, as this will tend to make them more restless.

## CHAPTER II.

### GENERAL CONFORMATION.

PRIOR to making a detailed examination of a horse with a view to purchasing him, the intending buyer should consider his general shape or conformation, by taking a view of the horse from his side, from the front, and from behind, whilst the animal is standing on level ground and in a natural position.

Sellers often make a horse extend himself by placing his fore-legs in front of the body and the hind legs behind it, which is an unnatural position for the animal to assume. Sometimes a horse is also shown on sloping ground, so that the fore-hand is higher than the hind-quarters, which in many cases adds materially to the favourable appearance of an animal and makes him look bigger than he actually is. In taking a general view of a horse from the side, it is usual to look at his near (left) side. Care should be taken not to stand too close, as a better general view is obtained by standing a short distance off him. Moreover, the horse must be in a quiet condition, and must not have been excited by sharp exercise or by any other means, as in this latter case he always appears to better advantage in the eyes of an amateur than when he has just been led out of the stable and is quiet. It should also be remembered that the appearance of most horses is improved when they carry harness or are saddled and bridled; hence when looking over a horse he should have nothing on but a halter or a snaffle bridle.

There is not a single horse in which some fault as regards his conformation may not be found. An intending purchaser, therefore, should not look for perfection in a possible purchase, but should merely see that the animal in question does not possess one or more serious faults as regards his conformation which are likely to affect his working value in a detrimental manner; whilst in minor matters on this point he must be guided by his own discretion and by the price he is willing to pay. If he wants a cheap horse, he will necessarily have to be more lenient in regard to the shape of the animal than if he is prepared to pay a higher price. The shape of a horse largely influences his monetary worth, and often increases or decreases his market value to an unwarrantable extent above or below his intrinsic worth. Though to some extent we may form an opinion of the working value and capacity of a horse from his outward appearance, yet this is not by any means the sole criterion, as is so often assumed.

The more importance a buyer places on the looks of a horse he intends to purchase, the greater stress must he necessarily lay on the shape being as near perfection as possible. At the same time, it must be pointed out that what appears to an amateur to be a good-looking horse may not be, and often is not a good shaped one, judged solely from the point of view of his usefulness for the kind of work he is intended for. It is therefore necessary to distinguish between the *looks* of a horse and his actual *shape*, and an intending purchaser should not be led away by the former into disregarding certain grave defects of conformation.

Leaving the question of looks—which is largely one of personal opinion—out of consideration, the chief points requiring consideration, and to which attention should primarily be directed, are the following:

The horse should not be “heavily topped,” that is to say, the limbs should not be too slight in comparison with the weight of the body; as if this is the case, his legs will not last long if he is subjected to much work—they will become prematurely worn. “Leggy” horses, which appear to have limbs of undue length,

are unsuitable for carrying a heavy rider or doing severe work in harness. Shortness of limb should in all cases be looked for. Ordinary ride-and-drive horses or hunters should not be higher at the croup than at the withers, as this kind of conformation tends to throw a greater strain on the forelegs, with a consequent rapid rate of wear of these, than is the case in normally built horses. The back should be short, especially if the horse is required for riding purposes. In harness horses, length of back is not so objectionable. The question of the length of the back is largely a comparative one, and can only be decided by taking into consideration the make and shape of the other parts of the body.

The shoulders of all horses used for riding or driving should be as sloping as possible. Upright shoulders are to be avoided, as horses possessing such are uncomfortable to ride; and whether ridden or driven, their forelegs become worn very quickly, owing to the absence of that elasticity of the fore-hand which is imparted to it by sloping shoulders. As but very little difference in the shape of the shoulder distinguishes a straight or upright shoulder from a sloping one—so little, in fact, that it is frequently imperceptible to an untrained eye—proficiency in judging this point can only be obtained by studying it in as many horses as possible.

Sloping shoulders are further required, as horses possessing them are good walkers and trotters in comparison with upright shouldered animals. In speaking of sloping or upright shoulders, the degree of slope of the shoulder-blade is meant. This bone is obscured more or less by the muscles covering it, thus rendering it difficult to judge of the exact degree of slope in many cases if only a cursory examination is made.

Whilst it is desirable to have a short back, which indicates strength, the total length of the body from the point of the shoulder (*i.e.*, the lower end of the shoulder-blade, which is prominent and easily seen) to the point of the buttock (the bony prominence more or less slightly clothed

with flesh, which may be felt and is seen a short distance below where the tail is set on) should be as great as possible. The respective lengths of the back and of the body are two quite different things, and must not be confused. In fact, the greater the total length of the body is in many cases, the shorter will be the back.

A further important point in all horses is that they should be "well ribbed up:" this indicates good breathing powers, and consequently denotes that the horse is able to stay well when trotting or galloping. A horse is "well ribbed up" when the posterior ribs are of good length and their lower ends extend well backwards. In horses that carry a fair amount of flesh it is not possible to judge of the length of the posterior ribs, owing to their outline being hidden from view. The fact of their being of sufficient length, however, is readily indicated by the depth of the body at this part (the depth being represented by an imaginary perpendicular line through the middle of the body from the back to the belly). If there is good depth at this part of the body, and if the distance from the last rib to the point of the hip is short, the horse is "well ribbed up."

The belly should not be "tucked up"—that is, the depth of the posterior part of the trunk (or "barrel" in technical language) should not be much less than that of the anterior part just behind the shoulders. In short, the underline of the body should be as near a straight line as possible. A drawn-in or tucked-up condition of the abdomen or belly indicates poor staying powers, or poor "doers," *i.e.*, horses which it is difficult to keep in good condition.

To a great extent, the size of the belly is less a question of conformation than of the way a horse has been fed. If fed largely on bulky food, such as grass or hay, he will of course have a much larger belly than when fed on plenty of oats, and not allowed to get fat and gross by plenty of work. Allowance will have to be made for this fact when judging horses.

The withers should be well marked and more or less

prominent in the case of well-bred horses, and those intended for riding. In harness horses this point is of less importance, although it is desirable.

It should be seen that the head is well set on to the neck, and there should be no coarseness where the head and neck join. Horses that have badly set-on heads are not as a rule so pleasant to ride or drive as animals with well set-on heads, because the latter can bend their heads better and consequently yield more easily to the bit.

## CHAPTER III.

### CONFORMATION OF THE LIMBS.

IT is highly important to pay great attention to the conformation of the limbs, as the value of a horse, as far as his usefulness for work is concerned, largely depends on this factor. A faulty conformation of the limbs is generally more objectionable than any faults of conformation in the body; and whilst the latter may sometimes be legitimately passed over by an intending purchaser, the fact that a horse possesses limbs which do not come up to requirements in regard to their conformation, is a very grave matter.

Taking the fore-leg first, it should be seen that the cannon-bone (between the knee and the fetlock) is comparatively short, the shorter the better. The fore-arm (from the shoulder to the knee) must be long, and well clothed with muscles. The leg should not be bent at the knee, as this denotes the effect of either age or overwork, or the combined effects of both. In some horses, it is true, a bent condition at the knee is a natural conformation, and in such a case need not be objected to. In order to determine whether the fact of a horse being "over at the knees" is due to over-work or age, or to natural conformation, one fore-leg should be held up so that the other leg has to bear all the weight of the body. If the legs have become bent by overwork or age, the leg that is on the ground will become straightened when the other is held up; but if the bent condition is due to natural conformation, it

will remain bent and not be straightened out. This test need only be applied if there is a doubt, as in most cases other easily-observed points besides the condition of being over at the knees indicate wear of the legs, whilst the age will already have been determined by an examination of the teeth.

The back tendons (constituting the back part of the leg between the knee and the fetlock) should run parallel to the cannon-bone, and must not be "tied-in" below the knee, which is the case if they are not parallel with the cannon-bone, and when the circumference round the leg just below the knee is less than it is further down the cannon. The outside line down the back of the back tendons should be quite straight, and must not bulge out anywhere. If this last is the case, the horse should immediately be rejected, as this denotes that he has at some time or other sprained the tendons, and that these are consequently weak and unfit to stand severe work at fast paces.

Long, coarse hair at the back of the fetlock-joint and on the back portion of the leg immediately above it, denotes an under-bred horse; but fairly long hairs of fine texture in the form of a small tuft at the fetlock-joint, are also found in well-bred horses if they are in a rough state.

The pastern (that part of the leg which is between the fetlock-joint and the coronet immediately above the hoof) should be fairly long and sloping. A straight pastern is to be avoided, and also a short one, these latter usually being comparatively upright. In older horses, which have done a considerable amount of work, and whose limbs have been subjected to wear and tear for some years, the pastern becomes more upright than it was during their youth. Horses with short and upright pasterns are uncomfortable to ride, but the chief reason why an oblique or a sloping pastern is required, is because it makes the horse's action elastic and springy, and prevents the limbs from becoming prematurely and rapidly worn by the effects of concussion.

A horse with fairly long and sloping pasterns is

generally a better walker, and also trots better, than one with the opposite kind. Length of pastern alone is not sufficient, as long pasterns are often upright—this may frequently be seen in thorough-bred horses—but chief stress should be laid on its being sloping.

Great weight should be laid on the hoofs being well-shaped, and their size being proportionate to the rest of the limb. Big, spreading, or flat feet are to be avoided, as they are not suited to being subjected to concussion and jars on hard roads, and such feet are in all cases more liable to disease than well-shaped ones. In highly-bred horses, a rather small hoof need not be objected to, as the feet often appear to be of smaller size, and, consequently, too small, than is in reality the case. Upright hoofs in which the heels (the back portion of the foot) are too high should be avoided.

Turning to the hind-limbs, the gaskins (that part of the limb which lies between the thigh and the hock-joint) should be as broad and muscular as possible—they cannot be too broad. The hock-joint is one of the most important parts in a horse, and it should therefore receive special attention. Viewed from the side, it should be very broad and well-developed. The hind-limb should be moderately bent at the hock. Legs that are too straight or too much bent (in the latter case the horse is said to have “sickle-hocks”) are both objectionable, the degree of objection increasing with the amount of speed that a horse is required to go at, either at the trot or at the gallop. The distance from the point of the hip to the hock should in all cases be as great as possible. The cannon-bone, as is the case in the fore-limb, should be short. The remarks made above on the fetlock-joint, the pastern, and the feet of the fore-limb, apply equally to these parts of the hind-leg. In regard to the feet, however, it must be remembered that in all horses the hind-feet are more upright and slope less than the fore-feet, whilst they are also narrower.

Having viewed the various parts of the limbs from the side as to their conformation, their position under

the body when the horse is standing in a natural position should receive attention. If the horse is made to "extend" himself, it is not possible to form an accurate opinion. When looking at the horse from the side, it should be seen that he does not "stand over" in front, *i.e.*, that the fore-legs are not placed too far back, but that they are perfectly vertical or upright. The hind-legs should not be placed too far backwards. In theory, a perpendicular line dropped from the point of the buttock to the ground ought just to touch the point of the hock and the back tendons of the hind-leg when the horse is standing in a collected manner. In practice, however, it will not do to adhere too closely to this theoretical requirement. But the more closely the position of the hind-limbs approaches to the ideal the better: hence it is well to bear this theoretical guide in mind.

Having observed the position of the limbs from the side, we then stand in front of the horse, noting the following points: The space between the fore-legs just below the breast should not be too wide, especially if the animal is wanted for riding. Not only is a horse with a broad breast and in which the fore-legs are placed wide apart, uncomfortable to ride, but this kind of conformation is also detrimental to his speed. In harness-horses the space between the fore-legs may be greater than in saddle animals, yet in their case also too great a width of the breast is not desirable, although it may be passed over in many instances. The fore-arms of well-shaped horses are not quite parallel to one another, as might be expected, but the distance between them at their upper portion is slightly greater than it is at their lower part—that is to say, the fore-arms converge in a slight degree. The cannon-bones, however, must be parallel to one another, and so should the fetlock-joints and the pasterns. An imaginary vertical plane passing longitudinally through the centre of the knee, should also cut the centre of the fetlock-joint, and pass through the centre of the foot.

Any deviation of the lower portion of the front limb from the position just stated, is more or less ob-

jectionable, according to the degree of the deviation. Turned-in or turned-out toes are both of them bad styles of conformation, not only subjecting the various structures of the leg to greater strain than is the case in normally-placed feet, but also giving rise to "brushing" or "speedy-cutting" in frequent cases.

After having viewed the horse from in front, he should be looked at from behind, and the position of the hocks should be especially noted, although examination must not be confined to this point, but should include all parts visible from behind.

The hocks may be either turned-in or turned-out to a greater or less extent. Both these kinds of conformation are objectionable if the turning-in or turning-out are marked. Horses with turned-in hocks are said to be "cow-hocked."

Turned-in hocks are not so serious a fault as hocks that are turned-out. In either case, the hocks are not as strong as they would be if they were of normal position, and are consequently more liable to be injured by the hock-joint being subjected to severe strain. The hind-feet should be squarely placed, the toes being neither turned-in nor turned-out. If the hocks are turned-in, the toes generally are turned-out more or less. Although this is in any case objectionable, the degree of objection to this kind of conformation depends upon the extent to which the toes are turned-out. If only slightly turned-out, it is not a very serious fault.

Whilst standing behind the horse, it should be further noted whether the points of the hips are of equal height on both sides. In cases of fracture of the hip-bone, the point of the hip is lower on one side than on the other. Attention must also be specially directed to the development of the muscles on the inside of the thigh. These muscles should be as well developed as possible, and should come well down the thighs. The horse should not appear "split up" between the hind-legs when viewed from behind. The greater a development the muscles of the thigh show from behind, the better.

## CHAPTER IV.

### THE ACTION.

HAVING finished examining the horse whilst he is standing, the intending purchaser should direct his attention to the horse's action at the walk and at the trot, the animal being led past him first at a walking and then at a trotting pace by the groom of the seller. Care must be taken not only to examine the action from the side as the horse passes the intending buyer, but to examine it also from in front as the horse is moving towards him, and from behind as the horse moves away.

Grooms when showing a horse for sale—and especially men in the employ of dealers—frequently take hold of the bridle close to the head, so as to hold the latter up to a greater or lesser extent, preventing the horse from keeping his head and neck in the position he naturally holds them in. By the head being held up the fore-legs are lifted higher when the horse is trotted than is usually the case, thus preventing the intending buyer from correctly observing the usual action at the trot. Lameness in one or the other fore-limb may also be obscured by means of this trick, as the horse cannot move his head and neck up and down in the characteristic fashion when lameness is present if his head be held well up by the groom who is leading him. Hence, in all cases when a horse is shown, and is walked or trotted past the person examining him, he should be led with a long rein, and the head should not

be interfered with by being held up, but should be carried in a natural manner by the horse. Only if this is the case can a correct decision as to the action be arrived at, and any lameness detected.

First of all, when the horse is moving it should be noted whether the animal is lame in front. This can readily be determined, because the horse "dwells" more on one leg (the sound one) than on the other (the lame one). One of the chief factors indicative of lameness in a fore-leg is the manner in which the neck and head are thrown up, or jerked up, as the lame leg comes to the ground, the horse doing this in order to take as much weight off it as possible. When the sound leg is placed on the ground, the head and neck are dropped. If lameness from some cause or other is present in both legs (usually in the feet in this case), it is of course not possible to detect it by the movement of the head and neck; but under these circumstances the animal will move his fore-limbs in an unnatural and cramped manner, which should readily be observed. Many horses that have been much worked, and whose legs have experienced much wear, go stiff to a greater or lesser extent in front, although they may not actually be lame. If this is the case, the legs will generally show signs of being worn, as will be explained in a succeeding chapter. As stiffness arising from age or overwork, or the combined effects of both, generally disappears to a great extent after a horse has been exercised for a short time, it is essential to examine the action of a horse immediately he leaves the stable, and after he has rested for a few hours previously. This should be made a special point in all cases where there is reason to assume that the horse is not sound in his limbs. Dealers having such horses for sale often give them preliminary exercise and warm them up a bit before showing them to an intending purchaser, in order to hide any defect with which the animal may be affected.

Having ascertained that the horse is not lame in front, it should be noted how he walks and trots, and whether his action is fairly free, the feet being lifted

well up and clearing the ground in a proper manner. Very low action either at the walk or trot, when the feet are raised but very little above the ground, is objectionable, horses with such action being prone to stumble on the slightest provocation. High action is not at all essential to the usefulness of an animal for work, this being merely a matter of personal liking, and of fashion so far as harness horses are concerned. In riding horses, very high action at the trot is in any case objectionable, such horses being uncomfortable to ride. As harness horses are usually driven at the trot, their action at the walk is of little consequence; but in riding animals this last should receive great attention.

In examining the action of the hind legs, it should also first be noted whether the horse goes lame behind. In many cases lameness in one of the hind limbs is difficult to determine, and it requires more skill and a more practised eye to do this than is necessary in order to determine if the horse goes lame in front. Stringhalt in one of the hind legs is readily observed. In this affection the diseased leg is flexed and lifted much higher than the other—to such an extent in fact, that even a novice cannot fail to notice this. In looking for lameness behind, it should be noted whether the two hind-legs are flexed in an equal manner, and whether the stride of the near hind-limb and that of the off one are of equal length. In short, the action of the two hind-limbs should be identical, both when the horse walks and when he trots. If this is the case, the horse is not lame behind. The hips should also be observed whilst the examiner is standing behind the horse when he is moving at the walk or trot. If lameness behind is present, the hip on the side on which the horse is lame will be carried higher than the other hip.

In some cases, horses go very wide behind—that is to say, the hind feet are placed more or less outside the footprints of the respective fore-feet. This manner of hind-action is unsightly, but it does not as a rule in any way affect the usefulness of a horse. Many fast trotters frequently go very wide behind. In riding-

animals the fact of their going wide behind should be objected to, because it looks bad; but in harness-horses it is not so noticeable.

An intending purchaser should not—if he can possibly avoid it—rest content with examining the action of a horse merely whilst he is being led past. If the animal is required for saddle work, he should be tried under the saddle, when a great deal can be learnt as to his action at the walk, the trot, and—what is highly important—at the canter. A riding-horse being frequently required to canter, it is highly important that he should canter well and easily. This fact can only be satisfactorily judged by the horse being ridden. A harness-horse should be driven in harness if possible, as only by doing this is the intending buyer enabled to form the most correct opinion of his trotting action. In a succeeding chapter the subject of riding or driving a horse it is intended to buy will be entered into more fully, as other points besides action require consideration in this case.

Having examined the general conformation of the horse, and having formed an opinion as to the suitability or otherwise of his action when walking and trotting, and supposing also that the animal does not go lame either in front or behind, a detailed examination must now be undertaken, and the intending buyer must also satisfy himself that the horse is free from any unsoundness or blemish which may detract from his usefulness for work, and that he is sound in his wind and eyes.

In making this detailed examination, it is most convenient and best to examine first the fore-legs, then the hind-legs, and after that the rest of the body.

## CHAPTER V.

### BLEMISHES ON THE LIMBS.

CERTAIN blemishes on the legs may have been observed by the intending buyer at an early stage, perhaps causing him to reject the horse at once. The following blemishes should invariably be looked for in horses it is intended to buy, the presence of any of them frequently being a sufficient reason for rejecting a horse.

Broken knees or scars on the knees indicating that the horse has been down on his knees at one time or other, are very serious blemishes, and reduce the value of a horse a great deal. Horses so blemished are very liable to come down again on slight provocation, whilst in many cases their knee-action is more or less stiff. Sometimes the fact of a horse having broken his knees is easily observable during a most superficial examination; but in other cases a manual and very close examination is necessary in order to detect this blemish. The fact of a horse having broken knees—whether the blemish is readily apparent or only slight—should exclude him from purchase.

Blemishes caused by the horse having been fired at some time or other must be looked for both in the fore- and in the hind-legs. Firing is performed by means of a hot iron, thus cauterising the skin and leaving more or less plainly visible scars. The firing operation is either carried out by making lines with the iron, these lines running parallel to one another, or it may be performed by means of a pointed instrument, a series of dots being made. The former mode is termed "line-firing" and the latter "puncture-firing." A horse may

have been fired owing to various causes, such as sprains of the suspensory ligament or the back tendons in the fore-legs, or on account of splints or ring-bone, whilst in the case of the hind-legs firing is in most cases resorted to in treating spavin and curbs. Where the firing has been performed in lines the blemish is readily seen, even on a superficial examination being made, but puncture-firing is not so easily observed, and its detection requires a closer examination. In all cases, a buyer should examine the fore-legs below the knee and the hind-legs about the hocks and below these joints for blemishes produced by firing. Of course the seriousness of the fact that a horse has been fired depends upon what was the cause of firing him, and in some cases, therefore, the blemish is of much less importance than in others so far as usefulness for work is concerned; yet firing marks are always a very great objection, and in many cases a sufficient reason for rejecting a horse. The fact of a horse having been fired always detracts from his pecuniary value to a greater or less extent.

In some cases horses are fired about the inside of the hocks, or at the seat of curb, merely as a preventive measure, without there being any necessity for doing so. This remark is especially applicable to Irish horses. Though *per se* firing does not constitute unsoundness, yet a private buyer had better abstain from buying horses blemished by the firing-iron. It certainly does not add to the appearance of any kind of turnout if the horse or horses have firing marks on their legs, and the same remark applies to riding horses.

Blemishes produced on the legs by the horse having bad action, causing him to speedy-cut, over-reach, or brush, should also be looked for.

A horse which speedy-cuts (*i.e.*, hits one leg just below the knee with the shoe or foot of the other when trotting or galloping) is to some extent depreciated in value thereby. In extreme cases such horses are dangerous to ride, as they may come down to the ground when speedy-cutting themselves owing to the pain pro-

duced. Speedy-cutting marks should be looked for close to and beneath the knee on the insides of the legs; besides the visible blemish, there is generally a small bony excrescence that can be felt on manual examination.

When a horse "brushes"—which he may do either in front or behind, or both in front and behind—he hits the fetlock-joint on the inside part of one leg with the inside portion of the shoe or foot of the other. Sometimes brushing (or "interfering," as this habit is also called) is due to weakness in the horse, or to the fact of his being out of condition, or to his paces not having been properly formed by correct breaking-in, whilst at others it is the result of the conformation of his limbs and their not having a normal position. In the former cases brushing will cease as its causes are removed, but in the latter instance it remains more or less a permanent habit, and admits of no real remedy, though palliative measures may be adopted. The degree of seriousness with which brushing should be regarded therefore depends upon the cause of the defect. Where horses brush owing to defective conformation, they are best avoided by an intending purchaser. Blemishes or wounds caused by a horse brushing can be seen on the inside of the fetlocks.

"Over-reaching" is caused by a horse hitting the back of his fore-legs (usually just above the heels) by the toes of his hind-feet. As a general rule, the fact of a horse bearing a mark due to over-reaching need not deter a person from buying him, over-reaching generally being an accidental occurrence that may happen to any horse.

In the case of hunters that are jumped and galloped on deep ground, they may injure the back tendons to a greater or lesser extent by over-reaching, sometimes permanently affecting the usefulness of the animal in question.

The various blemishes or scars on the limbs just mentioned may be noticed either during a superficial inspection, or else should be detected in the course of the close and detailed examination of the four limbs.

## CHAPTER VI.

### EXAMINATION OF THE LIMBS.

BEGINNING the examination of the fore-legs at the elbow, the examining person carefully works downwards to the hoofs. The elbow may be "capped"—*i.e.*, a serous cyst or swelling may be present. It should be ascertained if this is painful or not. In the latter case it is of no consequence, as far as the working value of a horse is concerned, unless it is of very great size; it is, however, more or less unsightly, detracting from the good appearance of the horse.

That part of the leg which is situated between the knee and the fetlock-joint (*i.e.*, the cannon) cannot be too closely examined. The intending purchaser should run his hand down the cannon-bone and also down the back tendons, doing this in a careful manner, so as to note any irregularities. The mode of feeling the fore-legs with the hand in order to examine them varies. The best way to perform it undoubtedly is by running the right hand down the cannon-bone and the left hand down the back tendons in the case of the near (left) fore-leg, and *vice versa* in the case of the off (right) one. It is better to use the hands alternately, as just indicated, rather than to examine the legs with one hand only, because a greater delicacy of touch is obtained by following the former method.

On the cannon-bone we have to look out for "splints," which are bony deposits or lumps of varying size. If situated well forward, and if they do

not cause the horse to flinch when pressed upon, they are of no consequence, although, of course—other things being equal—a horse without splints is preferable to one on whose legs splints are present. The bony excrescence due to speedy-cutting must not be confused with a splint. The former is usually just below the knee and situated well forward on the cannon-bone, besides which a scar will generally be present. Splints, however, may also occur close to the knee, and in such positions are very objectionable, as they may cause lameness.

Splints situated far back on the cannon-bone sometimes interfere with the working of the suspensory ligament and the back (flexor) tendons. In this case also they should be objected to. If very largely developed, the splint may be hit by the other foot when a horse trots. It will be seen from these remarks that judgment and discretion must be exercised by an intending buyer in regard to splints.

In examining the back tendons with the hand, it should be noted whether they are clean and that this portion of the leg is not enlarged or thickened. If the latter is the case, the horse may or may not evince pain on pressure being applied. If he flinches on this being done and shows pain, he should be rejected. If the back tendons are enlarged and thickened, but the horse does not flinch on pressure being applied and no heat is present, such an animal is conditionally sound—that is to say, he may be able to do the work required of him all right, and may not go lame—but his legs will not be able to stand a great deal of work, especially when of a fast nature, and if severely taxed lameness may result. Except in the case of cheap animals, horses with enlarged or thickened tendons should not be bought.

A distinction must be made between horses whose legs swell and become "filled" owing to the results of wear and other causes, and those whose back tendons are thickened. In the former case the tendons themselves may be perfect, but in the latter they have at some time or other been sprained, which renders them

permanently weak to a greater or less extent. "Filled" legs are also objectionable, indicating either that they have been subjected to much wear, or that they are naturally weak and not able to stand a great deal of work. As legs which fill when a horse stands in the stable "fine down" and appear quite clean after he has been exercised a bit, it is essential on this account—as well as for other reasons that have been discussed in previous chapters—to examine the animal immediately he comes out of the stable and after he has been standing quietly for some hours, if a correct opinion as to the state of his legs is to be formed. Hand-rubbing and bandaging also temporarily keep the legs "fine" and clean—facts which should duly be borne in mind by an intending buyer.

The fetlock joint has next to be examined. Many horses—owing either to having undergone much work on hard ground or roads, or to their legs naturally being weak and not able to stand much wear without detriment—are affected with "windgalls" about and above the fetlocks, which vary in size. As a rule, these are merely unsightly, but do not cause the horse any inconvenience or affect his working capacity. They are more objectionable in young than in old horses. Windgalls in many instances can be temporarily removed by bandaging, and a seller, more especially a dealer, may take advantage of this fact.

Enlarged fetlocks, showing more or less "puffiness," always denote either that the legs have been subjected to a considerable amount of wear, or that they are weak and not able to stand much work without windgalls, &c., arising. Whether an intending buyer should reject a horse on account of puffiness and an enlarged condition of the fetlock-joint or not, depends upon circumstances, and the decision must be left to individual discretion and judgment, as no general rule can be laid down.

Having examined the fetlock, the hand is passed down the pastern. The pastern is sometimes affected by "ring-bone," a disease in which bony excrescences are produced, similar in character to splints on the

cannon-bone. As a rule, however, ring-bone does not occur very often in the fore-legs, the hind-legs being more frequently subject to this disease. The exact position and the extent of the bony deposits due to ring-bone vary, they being either high up on the pastern-bone or low down, in which latter case the joint between the pastern-bone and the coronet-bone (also termed the short pastern-bone) is involved. Horses that are affected with ring-bone should be avoided, as generally they ultimately go lame, or at any rate in a stiff manner, even though at the time of purchase they may not do so. If a horse is lame from ring-bone when he is being examined, the intending purchaser will of course immediately reject him. During the early stages of ring-bone, when perhaps the osseous (bony) deposits may not be felt on manual examination, the horse will also go lame to a greater or lesser extent, and heat at the affected part will be present. Horses suffering from ring-bone are frequently treated by line- or puncture-firing; for the blemishes resulting therefrom the examiner should be on the lookout.

In examining the coronet, the posterior parts just above the hoof should be felt with the fingers, to see if the horse has "side-bone," or ossified cartilages. In sound horses, the posterior and lateral portions of the coronet should feel elastic and yielding to the touch, whilst if side-bone is present, they will be hard owing to the structures at these parts (the lateral cartilages) having become ossified. Side-bone is much more frequent in heavy cart and similar horses than in those used for riding or driving. Horses affected with side-bone do not necessarily go lame, although the action is more or less stiff, and the elasticity of the tread found in sound horses is wanting. In all cases both ring-bone and side-bone constitute legal unsoundness, though horses affected with them may be otherwise practically sound. A horse with side-bone, as far as ride-and-drive animals are concerned, should not be purchased.

"Cracked heels" should be looked for in the hollow

of the pastern at the back of the limb. It is difficult to lay down a hard-and-fast rule as to whether a horse affected with cracked heels should be purchased or not: in some cases it would be a pity to reject a suitable animal merely on this account, whilst in others the fact of a horse having cracked heels is a sufficient reason for desisting from buying him. In many instances, cracked heels readily admit of treatment, and once cured no further trouble is caused. But sometimes they are very difficult to heal, and even if healed, occur again on the slightest provocation, thus rendering horses a continual nuisance in this case, as they have to be kept under treatment for cracked heels almost persistently, which—though it may not actually render them unfit for work—to some extent diminishes their working value.

Whilst examining the coronet, "quittor" should also be looked for, this being an abscess in the foot, having its outward orifice at the coronet. A horse with quittor should in all cases be avoided.

The final part looked at in the examination of the limbs is the foot or hoof.

The fore-feet and the hind-feet should respectively be similar in shape, and the crust or wall should have a smooth and regular surface. If a number of raised irregular ridges close together on the horn of the wall are noticeable, the horse is suffering from chronic "laminitis," and must in all cases be rejected. The temperature of the foot is in this case also higher than it should normally be. The presence of abnormal heat in the foot should always deter the examining person from buying the horse. In young horses taken up from grass there may be raised ridges—so-called "grass-rings"—running round the wall, which are of no consequence, being due to irregular nutrition at different periods. These grass-rings are wide apart, or only one may be observable, and they cannot be mistaken for the ridges due to laminitis, besides which young horses off grass do not suffer from this disease.

"Seedy-toe" and "false quarter" must also be

looked for, as well as "sand cracks," when examining the hoof. "Seedy-toe" consists in the separation of the outer horny crust from the inner portion of the foot. This condition is to some extent apparent to the eye, and if the toe be tapped with a hammer or a similar instrument, a hollow sound will be emitted, which is not the case in a healthy foot. On removing the shoe—if seedy-toe be suspected, though there is some doubt about it—and looking at the sole of the hoof, it will as a rule be seen that the wall has separated to a greater or lesser extent from the sole.

"False quarter" consists in a separation of the horn of the wall at the side of the hoof, and is due to some injury sustained by the coronet, which interferes with the secretion of horn.

"Sand-cracks" are easily observable, being vertical cracks or fissures in the wall. Dishonest dealers may try to hide the presence of sand-cracks by filling them up with some material, but careful inspection cannot fail to detect this.

The foot must now be picked up, and the sole and frog should be examined. The former should be concave, or slightly arched. Convex soles denote chronic laminitis, or that the horse has had acute laminitis at one time or other, which is liable to recur. If the sole is "dropped" (*i.e.*, convex), the horse should be rejected.

It should be noted whether the frog is affected by "thrush," but as this complaint is as a rule easily cured by correct treatment, it is not at all a serious matter, and need not be taken into account, unless the disease is of a severe character, and the horse goes tender or lame in consequence.

It must be ascertained whether the horse suffers from corns, which complaint is indicated by dark red spots on the horn at the angle of the sole (that part of the sole lying between the frog and the outer wall at the posterior end of the foot). Frequently, however, corns are not easily detected, unless the horse goes lame from this cause. The shoes may be removed, and pincers used if there is an opportunity of doing so, in order to test the foot for corns.

The fact of the foot being "contracted" may be observed whilst it is placed on the ground, by the heels being narrow and high. On lifting it up, the frog will be found to be very small and shrivelled up. Badly-contracted feet should exclude a horse from purchase, but such a condition must not be confused with high heels, which a horse may possess when his feet are quite sound. High heels are, however, objectionable from the point of view of conformation.

Finally, it should be noted whether the shoes on the feet are of the ordinary form, or if they are special shoes and have in any way been modified at some point or other. In this latter case, it will of course be obvious that the horse requires special shoes, owing either to faulty action of the limbs causing him to brush or interfere, &c., or to some unsoundness. The cause of a horse being shod in a particular manner should be found out, as the question whether he should be rejected or not depends upon this, although it may be taken as a rule that horses requiring a particular kind of shoe should be avoided.

In handling the hind-limbs of strange horses, about whose quietness there is any doubt, it is the safest plan to get the groom to hold up one of the fore-legs, namely, the corresponding one to the hind-leg which is being examined: this proceeding prevents the horse from kicking. In all cases when handling the hind-leg of a horse—if the precaution just recommended is not adopted—the hand should firmly grasp and press down the hamstring, just above the point of the hock. The hamstring (*tendo Achillis*) is the tendon running over the hock and flexes the latter. By gripping the hamstring, the horse is, to some extent, prevented from kicking, but this method is not an infallible way of preventing kicking. A person should of course never stand close behind a horse, and when the hind-leg is being examined, the intending buyer should stand at the side of the animal.

The hocks require very careful examination; they are subject to bone-spavin, bog-spavin, curbs, and thoroughpins.

A "bone-spavin" (often shortly referred to as "spavin") is a bony excrescence formed on the lower portion of the inside of the hock as a result of inflammation. In well-marked cases of spavin the horse goes lame, but spavin does not always cause lameness, this depending on the exact position and nature of the spavin; although ultimately the horse will, in all probability, become more or less lame, or, at any rate, there will be stiffness in the hind-leg affected by bone-spavin. A horse that is lame as the result of spavin goes sounder after he has been exercised or worked for a little time, the lameness wearing off to some extent, as is the case in several diseases of the limbs. Once again, therefore, the importance of examining the horse immediately he leaves the stable, and before he has been "warmed up," must be impressed on intending purchasers. In the early stages of spavin (whilst the bony exostosis is still in process of formation) it may not be possible to detect it by manual examination, but the horse will go lame, or there will be more or less stiffness in the hock. In fully-formed spavins, they are apparent to the eye, or may be felt with the hand.

As sometimes it is difficult to determine whether a horse is affected by a spavin or not—as the conformation of the hock may be such as to make it appear that the animal is suffering from spavin—the two hocks should be very carefully compared. If they are exactly alike in conformation, the suspicion that spavin is present is probably without foundation. But if there is a bony exostosis on the inside of one hock, which is not present in the other, this is due to spavin. In comparing the hocks, they should be looked at both from in front and from the rear. It is not sufficient to examine each hock separately. The fact of a horse being affected by bone-spavin should immediately exclude him from purchase.

"Bog-spavin" has nothing in common with bone-spavin except the name. It consists of a soft swelling of varying dimensions, in front of the hock-joint, and is due to over-exertion of the hock, being found par-

ticularly in those horses whose hocks are naturally weak. Bog-spavin and thorough-pin (see below) are bursal enlargements, belonging to the same category as windgalls. As a rule, bog-spavin is merely an eyesore, and does not create lameness. In some cases of bog-spavin of recent occurrence, and when heat is present, they may cause a horse to go lame, in which case the animal in question should be rejected. As in all cases the fact of a horse being affected by bog-spavin is an indication that his hocks are naturally weak, or that they have at some time or other been sprained, it is not at all advisable to purchase a horse with bog-spavin if he is required to do much cantering, galloping, or any jumping, as in these cases good strong hocks are essential.

A "curb" is situated at the back of the hock, very low down, about 5in. or 6in. below the point of the hock. It is the result of sprain to ligaments at this part. Curb is readily detected, as when it is present a swelling or protuberance is to be seen at the part just indicated, when viewing the hind-leg in profile or from the side. Great care should be exercised in looking for it. Curbs are principally found in horses with weak hocks, which are not able to stand much strain; but sometimes even the strongest and best-shaped hocks are liable to get sprained, and curbs may result from over-exertion. This is particularly the case in hunters and horses used for very heavy draught. During the early stages of curb, whilst inflammation is still present in the structures involved, lameness is frequently caused, this of course leading to the rejection of the animal examined. When, however, inflammation has subsided, and when curbs are of old standing, they may not in any way affect the working value of a horse, and horses affected with curb may be regarded as practically sound, although from a legal point of view curb is always an unsoundness.

In judging of the importance to be attached to the presence of curb, the intending purchaser should take the conformation of the hocks into consideration. If these are strong and well-shaped, the horse may be

bought, whilst if they are of poor shape and appear weak, it may be advisable to reject him. In the case of weak hocks affected with curb, a sprain is always liable to recur on the hocks being subjected to much strain.

A "thorough-pin" is the result of over-exertion of the hock, and is more liable to occur in horses whose hocks are naturally weak than in those possessing strong and well-shaped hocks. As a rule, thorough-pins do not give rise to lameness, and are merely an eyesore—like windgalls—but at the same time they serve as an indication of weak hocks, or that the hocks have been subjected to much strain, which they were unable to stand without detriment. Thorough-pins vary much in size, sometimes being hardly perceptible, whilst in other cases they are very large and unsightly. Where heat and symptoms of inflammation are present in the case of thorough-pins, this is sufficient reason for rejecting the horse under examination, but otherwise thorough-pins—though always objectionable—may be passed over in not too high-priced horses. This kind of bursal enlargement is more objectionable in hunters than in harness-horses and hacks. The seat of thorough-pin is at the side and the posterior part of the hock, just above the point of the hock and in front of the ham-string; in sound hocks there is a depression or hollow at this part, but when a thorough-pin is present, there is a swelling which varies much in size in different cases. On pressing the swelling with the finger on the outer side of the hock, the fluid in the swelling will bulge out on the inner side of the hock.

Finally, a horse may have a "capped hock," the complaint being, to a great extent, analogous to capped elbow, and the same remarks made in the latter case also apply to the former. Capped hock is generally the result of the horse affected with it kicking in the stable and injuring the point of the hock. Whether an intending purchaser cares to have a horse affected by this vice in his stable or not, he himself must decide. Some object to capped hock, while others will put up with it.

Leaving the hock, the manual examination is continued down the cannon, the fetlock, the pastern, the coronet, and, finally, to the hoof. The remarks previously made in regard to these various parts in the fore-leg apply also to a great extent to the hind-legs. Splints are very rarely found on the cannon-bone of a hind-limb. Windgalls around and above the fetlock-joint are very common, and blemishes resulting from the horse brushing with his hind-feet must be specially looked for on the inside of the fetlocks and just above, as horses more frequently brush behind than in front. It should also be noted whether marks are present on the hair just above the fetlock, from the horse having to wear boots to prevent his hurting himself through brushing. Ring-bone is much more frequent behind than it is in front, whilst the opposite is the case with side-bone, which very rarely occurs in the hind-legs. Corns also are not, as a rule, met with in the hind-feet.

This completes the examination of the limbs. As these are the locomotive parts, and as the work of a horse consists in all cases in locomotion, the examination of the legs cannot be too carefully or too thoroughly performed. The saying "no foot, no horse," is well-known. It would be more correct to say, "no leg, no horse," as unless the limbs of a horse are sound and can stand work, he is useless to a greater or lesser extent, and of little value in the market.

Some persons, when examining a horse, look at the near legs first, then proceed to the off-hind, finishing at the off fore-leg. It is a better plan, however, as I have before remarked, to examine the two fore-legs first, and after that the two hind ones.

## CHAPTER VII.

### EXAMINATION OF THE BODY.

IN making a detailed examination of the head, neck, and body, the following points require attention: The corners of the mouth should be examined to see if they are sore (this will generally already have been observed when looking at the teeth to ascertain the animal's age). The fact of the corners of the mouth being sore is frequently an indication that the horse is a puller, but in many cases a sore mouth is caused by severe biting and an incompetent rider and driver.

The space between the branches of the lower jaw should be felt to see that the glands are not swollen, and it must also be noted whether the glands situated at the juncture of the head and neck are in a swollen condition or not.

Notice if there is any discharge from the nostrils, indicating a cold. In bad cases, the horse must be rejected on this account. The muscles on the near and off shoulders should be compared with one another. If they appear to have wasted away on one side, this is due to the shoulder having been sprained at some time or other. The shoulders should also be examined to see if there are any harness-galls, or whether the skin is sore.

The withers may be galled, or the horse may have a sore back, caused by the pressure of a saddle. In severe cases of galled withers or sore back, the horse should be rejected if bought for riding purposes, as

treatment is tedious, and when healed the evil easily recurs on the slightest provocation.

The brisket (*i.e.*, the lower part of the chest, immediately behind the elbow of the fore-leg) should be examined to see if there are any girth-galls, or if the skin has been rubbed sore. If this is the case, it indicates a tender skin at this part; and though such galls or sores may be temporarily healed, a horse that has once suffered from them is very liable to do so again, and may be the cause of a lot of trouble on this account.

The dock of the tail where it joins the body should also be looked at to see if it is sore, or has been chafed by the crupper in the case of harness-horses. This is objectionable, but not of much moment unless a very severe case.

The inside of the thighs should be looked at to see if there are any warts between them, which may give pain when the horse moves and become sore.

Cases of hernia, or rupture of the abdomen, cannot fail to be detected by an intending purchaser, and, if present, should exclude the horse from purchase.

In examining the body, the near (left) side should be looked at first, and then the off (right) side, beginning in each case at the head, and working towards the tail.

## CHAPTER VIII.

### WIND AND EYESIGHT.

THE wind and eyesight may be tested at various stages of the examination of the horse, according to circumstance.

It is highly important to find out whether a horse is sound in his wind. If unsound in this respect the animal is comparatively or absolutely worthless, and should on no account be bought.

The commonest cause of a horse being unsound in his wind is "roaring." This disease of the respiratory organs is due as a general rule to paralysis of either or both of the muscles that open the larynx (which leads into the windpipe). In exceptional instances roaring is caused by other abnormal changes in the air-passage, which need not be further discussed. In some cases roaring is much less marked than in others, and the degree of seriousness of this affection varies considerably. Roarers are often capable of doing satisfactory work in slow draught, provided it is not heavy. Again, some roarers may be quite useful for performing slow trotting work in harness, and the fact of their being roarers may not be at all noticeable under such circumstances. In no case and under no circumstances, however, should a horse affected in his wind be purchased, as if the buyer should wish to sell him again at some subsequent period, he will find a horse "touched in his wind" exceedingly difficult to dispose of, and in no case will he realise an acceptable price.

The most satisfactory and reliable test of a horse's wind can only be made either by galloping him under a rider on soft and somewhat heavy ground if he is a hunter, hack, or ride-and-drive horse, or by driving him at a fast trot, if possible up a slight incline, in harness if he is a harness animal. These methods of testing the wind cannot fail to make known to the intending buyer the fact of the horse being unsound in his wind.

In bad cases of roaring, the characteristic sound emitted during the inspiration of air (to which the appellation of "roaring" is due) may be readily heard at the commencement of the gallop, or even when the horse is gently trotted; but in slight cases the fact of a horse being a roarer may only become apparent after the animal has undergone some exertion. When driving a horse in order to test his wind, a piece of soft ground should be selected, as the noise made by the hoofs and wheels on hard ground may prevent the sound of roaring being heard if it is made by the horse. It is best if the person testing the animal's wind himself rides or drives him, as the fact of a horse "making a noise" can be most readily detected in this way.

"Whistling" is a form of unsoundness of wind closely allied to roaring, being the result of contraction or thickening of some part of the air passages. The noise made by a "whistler" is shriller than that made by a "roarer," as indicated by the names of the respective infirmities. Whistling constitutes unsoundness of wind just as much as roaring, and "whistlers" should never be purchased. As a rule, whistling is not quite so serious an unsoundness as roaring, but this depends on the severity of the affection.

In some cases neither roaring nor whistling may be heard whilst the horse is being galloped or trotted, owing to the noise made being very slight, and only being audible if the person examining the horse for his wind stands close to the horse's head after he has had a gallop or been smartly trotted in harness for ten minutes or so. The buyer should therefore never omit to do this.

The affection known as "broken wind" (in technical language, emphysema of the lungs) is a very serious form of unsoundness, horses affected with it being quite unsuited for even moderately fast work or heavy draught in harness. In no case should an intending purchaser buy a broken-winded horse. The nature of broken wind is quite different from that of roaring, the former affection having its seat in the lungs and being marked by a permanent difficulty of breathing, especially if the horse is required to go at fast paces. The symptoms of broken wind are as follows: Whilst the horse is at rest it will be noted that during the expiration of air two distinct efforts are made in doing so, the flanks being heavily heaved. In sound horses, only one effort, and that hardly perceptible when the horse is resting, is made during expiration. When a broken-winded animal undergoes exertion, the difficulty of breathing becomes much more marked, and respiration is very rapid. The presence of a cough is also a symptom of broken wind.

Chronic cough constitutes an unsound condition of the respiratory apparatus, and horses affected therewith must be avoided. The sound of chronic cough is hard and dry, and it is readily excited when the horse affected by it is subjected to fast exercise. In many cases it is of course difficult to distinguish between a temporary cough and the chronic form unless the horse has been in a person's possession for some time. As a rule, it is best to reject all horses suffering from any kind of cough if there is any doubt about its character.

In many cases when buying a horse it may not be possible to test the animal's wind by galloping him or trotting him in harness as described above. Under such circumstances recourse must be had to "coughing" and "grunting" him as a means of finding out whether he is sound in his wind (*i.e.*, whether he is a roarer) or not. The practice of "coughing" a horse consists in compressing his larynx with the hand, the fingers being placed on one side and the thumb on the other, and then pressing them together. The larynx may be

readily felt, being a kind of cartilaginous box just behind the throat. "Coughing" a horse is very easily performed, and requires neither skill nor practice. Once the exact position where to compress the larynx is known, nothing further is required. If a horse is sound in his wind he will readily cough in a healthy manner on the larynx being compressed as just described, while roarers generally do not react on being "coughed" by coughing. Still, the testing of a horse's wind is not nearly so satisfactory by "coughing" him as by galloping or trotting him and subjecting him to severe exertion.

The value of the practice of "grunting" an animal is a very doubtful one in trying to find out the state of his wind. "Grunting" a horse consists in threatening to strike him with the fist or stick in the region of the belly, or actually hitting him there. This is done with the right hand, whilst the left holds the horse's head, the examining person standing on the near (left) side. If a horse, on being subjected to "grunting," emits a grunt-like sound, it is generally assumed that he is unsound in his wind. A horse affected with unsoundness of wind or roaring (the grunting test is only applicable for finding out if a horse is a roarer or not) does not, however, always grunt, though in the majority of cases roarers do so on being "grunted." On the other hand, horses that are quite sound in their wind will grunt on being tested in the manner just described. Hence the "grunting" test is not at all an infallible one; but in all cases where horses do react on the test by grunting, the intending purchaser should be suspicious as to an animal's wind, and examine it very carefully as described above.

Finally, in looking over a horse, a special examination must be made in regard to his eyesight. The fact of a horse being blind in one eye or in both eyes is often readily observed on the most superficial examination. In all cases the eyes should appear clear and perfectly healthy, and it should be noted whether the eyelids are at all swollen and inflamed. The cornea should be free

from any opaque spots, though very small ones at the outside portion of the cornea are often of little account. The eye must specially be examined for cataract. Though the fact of a horse having cataract is in many cases easily observed, the "candle test" is often the only means of ascertaining whether the eyes are sound or not. The "candle test" is as follows: The horse must be placed in a stable, and his head should be in as dark a position as possible. A lighted candle or taper should then be held in front of the eye. In a perfectly sound eye three reflections of the flame can be seen, two of them upright and the other upside down. On moving the candle in front of the eye, the two upright reflections of the flame move in the same direction as the candle is being moved, while the inverted reflection appears to move in the opposite direction. If cataract is present, only the two upright images of the flame can be observed, the inverted one being absent, or—during the early stages of cataract—very indistinctly visible.

It is not advisable to purchase horses that are unsound in their eyes or that have defective eyesight, as a rule. Such animals are much given to shying. Especially in the case of riding horses is it essential that their sight be perfect. In the case of harness animals, the dangers of driving horses whose vision is defective may to some extent be averted by employing fully-closed blinkers on the bridle. But it certainly is not very agreeable to drive horses that are thus debarred from seeing where they are going, nor does it look well to use blinkers that wholly exclude the light from the eye.

## CHAPTER IX.

### TRIALS—GENERAL HINTS.

AN intending buyer should always—if it is possible to do so—try a horse that he intends to buy, either under the saddle or in harness, according to whether the animal is required for riding or for driving. Besides finding out about the animal's action and the state of his wind by this means, as described previously, any vices with which he may be affected and that may detract more or less from his value or even render him altogether unsuitable, are readily detected. Without a trial under the saddle or in harness it is impossible to find out whether the horse in question is quiet for riding or driving or not. He may prove to be a jibber in harness, or to shy so badly that he is dangerous to either ride or drive. In such cases the animal should of course immediately be rejected, even if he is perfectly sound and his conformation and action are satisfactory.

In trying a horse under the saddle or in harness a severe bit should not be used. A snaffle is best for riding him in, and the usual driving-bit should be used for driving him. This allows of the intending purchaser finding out whether he is a "puller," and whether he "bores on the bit" at all. In order to test whether he is a willing worker in the collar, he should be driven for some distance at a good pace—say, for at least three-quarters of an hour—taking care to see if he readily goes up-hill. Some horses that are

perfectly steady in harness on level roads may jib on being driven up an incline. If required for town work, it is essential to drive the horse among traffic and past the railway if possible, so as to make sure that he is quite quiet in harness under all circumstances.

By riding or driving the horse for some length of time and at a fairly good pace, it will also be noticed whether he is a good goer and has courage, or if he is lazy and requires the whip to make him go along.

When trying a horse under the saddle, he should be walked, trotted, cantered, and galloped, whilst a harness-horse should be tried at a steady trot.

It should be found out if possible whether the animal it is intended to buy is quiet in the stable, or whether he is affected with some vice, such as kicking or biting. The fact of a horse's being a kicker can often be detected by the marks of the hoofs on the stall-partitions if the animal in question has been standing in the same stall for some time. The manner in which a horse behaves whilst in the stable must also be closely observed. One that is suffering from some disease or is out of health will stand in his stall or box in a sleepy manner, with drooping head, and the ears will remain motionless. Healthy horses appear alert, and their ears are continually moved in various directions on the slightest noise being made.

The fact of a horse being lame—more especially in the fore-legs—may also often be detected whilst the horse is standing in his stall. If the limbs are sound, the fore-legs should be firmly and squarely placed on the floor, both bearing an equal share of the horse's weight; but in many cases of severe lameness the lame leg is placed in front of the other one, and hardly any weight is put on it by the animal, it being slightly flexed at the fetlock or bent at the knee. Sometimes the toe only touches the ground, the heel being raised, as is the case in navicular disease, for instance. Though a horse quite sound in his limbs may slightly advance one fore-leg in front of the other, yet on his being made to move he will bring them equally under the body and put an equal share of his weight on each;

whilst if one leg is lame he will continue to keep the weight off it by "pointing" with it.

In cases of laminitis in the feet (a very serious lameness) both fore-legs will be advanced more than is normally the case when a horse is standing.

As regards the hind limbs, a sound horse frequently gives them a rest alternately by flexing the hock and raising the heel off the ground, placing all the weight on the other limb.

In going up to a strange horse in his stall, care should of course be observed. The animal should be informed of a person's approach by being made to stand "over" to the right side of the stall. When he has done this, the intending purchaser should enter the stall on the left side and pat the horse on the neck. It should be observed whether the animal displays any ill-temper by laying back his ears or attempting to kick by raising his near hind leg.

It should further be noted whether the horse "weaves" at all or whether he "crib-bites." Both of these are stable vices, the first due to nervousness, the second to indigestion. In order to observe weaving or crib-biting, it is necessary to watch the horse for some time.

In all cases, enquiry as to the way a horse is bred should be made of the seller, and in the case of thorough-breds their pedigree should be obtained if possible. Similarly, if a pure-bred hackney is bought it should be ascertained whether he has been entered in the "Hackney Stud Book," and if so, all particulars should be obtained, as these may be of use later on, if the animal is to be sold.

The exact mode of proceeding in buying a horse to a great extent depends upon circumstances and on the conditions under which he is acquired. A horse may be bought off a dealer, or from a private gentleman, or he may be purchased at an auction either in the country or in London. For inexperienced buyers it is certainly safer, and in the long run more satisfactory, to buy horses that are privately owned, or from some well-known and high-class dealer. In the latter case, pretty

high prices—speaking comparatively—have to be paid. In many cases it may be possible to obtain a horse on trial for a certain period, when the intending purchaser can, at his leisure, examine and try a horse that he thinks will suit him. If a horse is thus obtained on trial, it must of course be agreed beforehand as to the liability of the parties in the event of the animal becoming ill or dying during the period of the trial.

Buying at an auction horses of which the intending purchaser has no previous knowledge is always a risky thing, and great care and judgment must be exercised in examining the animal it is intended to bid for as closely and thoroughly as circumstances will permit. But even the most experienced horseman may make a mistake under such conditions. At all the large horse-marts—such as Tattersall's and Aldridge's—information as to whether a horse is sound in his wind and eyes, and whether he is lame or not, can in many cases be gleaned from the catalogue (vide the Conditions of Sale printed therein). Where horses sent up for sale by auction are not warranted in any way, and not described as quiet to ride or to drive (as the case may be), the intending purchaser must be exceedingly careful; and unless really experienced in the examination of horses, the amateur should keep clear of them, for although they may be all right, the probability is that there is something wrong with them, as otherwise there would be every reason for the seller to warrant them.

When buying more or less valuable horses privately, the purchase may of course be affected subject to a veterinary surgeon's examination as to soundness. In this case the intending buyer would confine his own examination of the horse to its action, conformation, and behaviour under the saddle or in harness, the examination in regard to soundness being left to the vet.

In buying horses privately a warranty as to soundness may be obtained, but owing to the fact of the practice of warranting horses giving rise to many disputes this plan has fallen into disuse to a great extent, and is not popular at all.

It need hardly be pointed out that a great deal of

trickery and dishonesty go on in the horse-dealing world, and a buyer, especially the not very experienced, should be very careful as to whom he deals with.

In purchasing horses privately little attention need be paid to the statements of the seller's groom, and unless that person is well known to the buyer it would be very unwise to rely on any of them, as a general rule. Even a sufficiently large tip usually fails to get anything really worth knowing or anything reliable out of the seller's groom, as is only natural, seeing that he—like his master—wants to effect the most advantageous sale possible.



## PART II.—MANAGEMENT.

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### CHAPTER X.

#### FEEDING.

THE quantity of oats to be given to horses depends to a great extent upon the amount and nature of the work they are required to perform. The more work a horse has to do, the larger must be the allowance of corn; and horses that are galloped much (hunters, for instance) require proportionately more oats than those which are used for trapping purposes and are worked at a trotting pace. The question of the amount of oats necessary is also influenced in some degree by the size of an animal: ponies and cobs do not need as many oats as do full-sized horses. Much further depends upon the appetite of each individual animal. Some require more oats than others if they are to be kept in good condition, even if an equal amount of work is done in both cases. In fixing the allowance of oats, therefore, no hard-and-fast rules can be laid down, as so much depends upon the circumstances of each particular case, and the horse-owner must in some measure be guided by his own judgment and observations.

The daily allowance of oats may range from 10lb. to 16lb. in the case of full-sized horses, though hunters are sometimes given as much as 18lb. during the hunting season. The average ration for horses used for trapping or hacking is from 10lb. to 12lb., supposing they are doing a moderate amount of work. Big carriage horses, as a rule, get somewhat more than this

—say 14lb. a day—though if the work is not severe, a smaller allowance of oats will often suffice to keep them in good working condition.

From 8lb. to 10lb. is an average ration for cobs and ponies, much of course depending upon the amount of work they have to perform. If they are worked hard, 10lb. may not be sufficient. For small ponies, whose height is somewhere about 12 hands or so, an allowance of 4lb. or 5lb. of oats will often meet all requirements.

Oats vary considerably in regard to their quality, feeding-value, and weight per bushel. The weight of a bushel of oats ranges from 33lb. to 48lb., those of average quality weighing from 38lb. to 42lb. a bushel. Both the price and the feeding-value of oats depend principally upon their bushel-weight. A quarter of oats contains eight bushels, and two sacks go to the quarter.

Good oats not only weigh heavier per bushel, and therefore contain more actual feeding-matter than inferior oats, but the former also possess a relatively higher feeding-value than the latter pound for pound; that is to say, a given weight of oats whose bushel-weight is 42lb., contains more nourishment than an equal weight of oats which weigh only 37lb. to the bushel. Due consideration should be given to this fact in fixing the ration of oats to be fed to the horses.

It is not always necessary to feed very heavy oats; those weighing from 39lb. to 42lb. per bushel are quite suitable for ordinary requirements. It should be seen that they are in a sound and dry condition, free from dust, and have no mouldy smell. New oats are not suitable for feeding to horses, especially to those doing fast work.

As a rule, it is best to feed oats in a whole state; but if young horses are troubled by their teeth, and consequently cannot masticate their food properly, the oats may be crushed.

In cases where a cob or pony is kept for ordinary trapping purposes, and is not required to do very fast work, it will often be found cheaper to substitute maize for part of the ration of oats, should economy be an

object. Maize is a useful food for horses that are not called upon to gallop or be in very hard condition, and it is much used for feeding 'bus- and farm-horses. It may either be fed in a whole state, or can be roughly crushed. If given whole, it should be steeped in water for eighteen to twenty-four hours prior to feeding it, in order to soften the grain; but crushing roughly is to be preferred. When maize is fed to horses not used to it, they must be accustomed to it in a gradual manner, at first giving only a little, and slowly increasing the allowance until the full amount that it is intended to feed is reached. If this precaution is omitted, more or less serious digestive disturbances might result.

Maize is not very suitable for horses that are worked irregularly and get many holidays, being more suited to those doing steady and regular work. It is not advisable, as a rule, to substitute maize for more than half of the allowance of oats. A quarter of maize weighs 480lb., the bushel-weight being 60lb. It will be noticed that it weighs considerably heavier than do oats.

Beans are a very rich food and expensive to buy, and there is no necessity whatever of feeding any to moderately-worked horses. They are, in fact, injurious under the circumstances, on account of their great richness and consequent heating properties, and should therefore be avoided. They are often a cause of "filled" legs. This foodstuff is only suitable for hard-worked animals, such as hunters which are regularly hunted during the season; but even in this case only small quantities should be given (say up to 2lb. a day), and they are not absolutely necessary.

The bushel-weight of beans ranges from 60lb. to 64lb. They must be old and in sound condition when fed to horses, new beans being unsuitable. They are usually fed in a split state.

The quantity of hay that should be fed varies considerably in different cases, and is largely regulated by the appetite of the horse and the allowance of corn that is given. The more corn is fed, the less hay will the

horse require; but a certain minimum amount is in all cases absolutely necessary, as hay, on account of its bulky character, is an essential article in a horse's diet, if he is to keep in health and his appetite is to be satisfied. Even with an unlimited allowance of oats, horses require to eat more or less hay.

As the appetites of horses vary so greatly, it is not possible to fix exact quantities of hay that are to be fed, and it is best to let them have as much as they will clear up. Assuming that a horse receives an allowance of corn that is sufficient to meet his requirements in order to perform his work properly, the appetite is the most satisfactory guide as to the amount of hay he requires. Of course, only as much hay must be given as the animal will readily clear up, and he should not be allowed to absolutely gorge himself with hay, as some gross feeders may do if they have the opportunity. As a general rule, it will be found that from 8lb. to 15lb. is the daily quantity of hay consumed, according to the size and appetite of a horse and the amount of corn provided. This will mean from one to not quite two trusses of hay per week.

A truss of old hay weighs 56lb., and of new 60lb. The latter is not suitable for horses, and hay requires to have undergone a "sweating" process in the stack prior to being fit for use. Hay can well be fed after being in the stack for six months, though some prefer it to be a year old, especially where the feeding of hunters is concerned. New hay, in which the sweating process has not been completed, may cause digestive disturbances; it also induces scouring.

Clover hay, if well saved, is more nutritious than meadow hay, and is generally liked by horses, but it has an adverse effect on the wind of animals used for fast work, and its use is not compatible with hard condition. There is, however, no objection to giving some clover hay to cobs and ponies doing slow trapping work, provided it is a sound sample. Meadow hay, also, must always be sound and dry, and should not have a mouldy smell, nor must it be full of dust, as many badly-saved and inferior samples are.

Sainfoin hay is very suitable for feeding to horses not doing very fast work, but it is often extremely coarse, owing to the many stems it contains. It is much relished by horses.

Horses should be given corn at least three times a day; but if it can conveniently be arranged, it is better to divide the daily allowance into four feeds. The intervals between the times of feeding should be approximately of equal length, and the morning and evening feeds should be given respectively as early and as late as possible. The feed of corn given in the evening should always be the largest.

It is advisable to mix some "chop"—consisting either of chaffed hay or of equal parts of this and of chaffed straw—with the oats, in order to ensure a more thorough mastication, and prevent the oats from being swallowed too hastily. Some horse-owners prefer to give a great deal of "chop" with the corn, while others give only a little. Provided the chaffed hay is known to be of good quality, it matters little which plan is adopted, though a reasonable limit should not be exceeded. Where hay-chaff is bought ready chaffed from the corn-merchant, it is often of very inferior quality, in which case it is of course best to feed quite a small quantity, only just sufficient to mix with the oats being given. The presence of some chaffed straw in the chop is an advantage, and it is therefore to be preferred to feed chop consisting of half hay and half straw, than chop consisting only of chaffed hay.

If given much chop, the horses will of course eat less hay in a long state than they do if only a small amount of chaff is provided. The largest portion of the allowance of hay should be given at night, the hay-racks being filled just before shutting up the stables, so that the horses can consume it at their leisure, after having finished their feed of corn. Some hay should be given after a horse comes in from work, and the rest of the hay may be divided into two portions, one to be given first thing in the morning and the other somewhere about mid-day, or any other time during the day that

may be most convenient, and does not interfere with the horse's hours of work.

When horses are stabled and fed on dry food only, they become more or less constipated, and the system is easily heated, unless care is taken to provide a sufficiency of laxative food in order to keep the bowels in proper working order. Bran mashes are most generally resorted to for this purpose during the winter or if other laxative food is not available. A bran mash has a well-marked relaxing effect on the bowels, and counteracts the constipating effects of dry fare. It is usually given once a week, but in many cases it is advisable to feed bran mashes more frequently, say twice a week or so. They are best given at night, before the last feed of corn. A bran mash may also suitably be given to horses when they come into the stable very tired, after a long journey, as it has a soothing effect. Some gruel is still better under such conditions, and this is very generally given to hunters after a long day with the hounds.

In preparing a bran mash, some bran (say from 2lb. to 4lb.) is placed in a bucket, and boiling water poured on to it, the whole being well stirred, so as to wet all the bran. The bucket is then covered with a sack, and left standing for about an hour, when it will be ready for feeding. Some cold water may be added prior to giving it to the horse, in order to make it sufficiently cool and sloppy.

Dry bran has not the laxative action that is possessed by bran mashes; on the contrary, it is slightly astringent in character if fed in large quantities. Small allowances (say about 1lb. daily) of dry bran may be mixed with the corn, as it is very palatable to horses, but there is no absolute necessity for doing so.

Linseed mashes are also good laxatives—better even than bran mashes—but linseed is an expensive article of food. A combined linseed and bran mash composed of equal parts of both foodstuffs may be resorted to, this being a very suitable laxative.

Carrots are a very good food for horses, and are much relished by them. Whenever possible, a supply should

be in the stable. They are best fed in a whole state, as if cut up into pieces, these latter might stick in the horse's throat and cause choking. Up to 5lb. or so a day may be given, if sufficient quantities are available. Being succulent in character, carrots relax the bowels; but as they are generally not given in large enough allowances to stabled horses to counteract the binding properties of dry food, bran mashes will occasionally be required in addition to the carrots.

Apple-peelings may very suitably be given to horses, as they are very fond of them.

A lump of rock salt ought always to be accessible for horses, being placed either in the manger or in the hay-rack, as they require some salt, and unless they are able to satisfy their requirements in this regard they cannot be kept in perfect health. A supply of salt, moreover, stimulates the appetite.

The mangers must be kept clean, and should occasionally be scrubbed with water. A practice must be made of clearing them out with a wisp of hay or straw prior to a feed of corn being put in. Horses do not relish food on which they have blown, or which has been slobbered over, and though they may not take any notice of this when they are hungry and have a good appetite, yet delicate feeders are often caused to refuse their food on this account.

It must be remembered that well-bred horses are, as a rule, particular about their food, and may very easily be put off their feed by improper management, more especially if they are kept short of work or exercise; while many horses that have undergone severe exertions of long duration—hunters, for instance, after a long day—also suffer from loss of appetite for a shorter or longer period subsequently. Under these circumstances, some skill and nicety of management are required in order to keep up the appetite, and to get the animals to consume their due allowance of oats.

When a horse is a delicate and shy feeder, and his appetite somewhat erratic, this may often be stimulated, if necessary, by adding a little dry bran or a handful or two of linseed-meal to the feed of corn. Locust beans

and locust bean-meal are also much liked by horses on account of the sweet taste, and a small quantity (say a couple of handfuls) may be mixed with the food with a view to inducing the animal to consume it. In other cases, the damping of the food may prove beneficial; or, when green forage is available, some of this may be chopped up and mixed with the corn, thus rendering the food more palatable.

A great point is not to over-feed horses in any way, over-feeding being a frequent cause of putting them off their feed. If any food remains in the manger after the animal has ceased feeding, it should immediately be removed. It is a very bad practice and gross mismanagement to fill the manger with corn and chaff, and then to leave any food that has not been eaten in it until the horse becomes hungry again. Nothing is more calculated to disturb the normal appetite and induce irregularity of feeding than this.

If the feeds of corn are large, it is a good plan to divide them into two portions, putting the second lot into the manger when the first one has been cleared up. This especially applies to the evening feed, which, as has been pointed out, should always be larger than those given in the daytime. The practice of giving four smaller feeds of corn a day instead of three larger ones is also calculated to keep the horses in good appetite.

Special treatment in regard to feeding is necessary in the case of horses taken up from grass after having been turned out for any length of time during the summer, as well as when taking young horses into the stable for the first time. It is very unwise, not to say dangerous, to commence giving a full allowance of corn to such animals. There is a vast difference between the character of succulent grass and herbage (which constitutes the food of turned-out horses) and that of dry corn (which is a highly concentrated foodstuff) and hay fed to stabled animals. A sudden and abrupt change from the one kind of food to the other has an injurious effect on the health of the horses, upsets the digestive system to a greater or less extent, and may in

extreme cases lead to fatal consequences. At the best, feverish symptoms and disarrangement of the bowels are caused under such circumstances, and great care and judgment in feeding must therefore be exercised so as to obviate any adverse effects as much as possible. Only a small quantity of corn must be given at first, the allowance being gradually increased as the animal becomes accustomed to the changed character of his diet, until after, say three weeks, the full allowance of oats is reached. It is a mistake to imagine that hard-working condition can be obtained more quickly by feeding a full ration of corn to horses directly they come up from grass. Such a proceeding would not attain its object by any means, even supposing no evil consequences were to attend it. Hard condition is not obtained merely by giving a horse plenty of oats, but it can only be produced by the combined effects of judicious exercise (or work) and of feeding on hard corn. Hence time is always required to get a horse just up from grass—be he old or young—into a fit condition to stand severe or fast work without injurious consequences.

In hunting-stables, one or more doses of physic (or purgative medicine) are usually given to hunters that have been summered at grass on being taken up again, prior to their being got into hard condition for the season. It is questionable whether the administration of physic is always necessary in this case; but it certainly is not required where horses used for ordinary trapping or riding purposes are concerned.

In addition to gradually bringing a horse on to his full allowance of corn when he comes up from grass, a plentiful supply of laxative food should be given at first, reducing the quantity as the horse becomes accustomed to dry fare, until finally it consists only of the weekly or bi-weekly bran mash and a few carrots daily—if these latter are available.

The state of the dung is a good guide to go by in deciding as to the amount of laxative food required and the frequency with which it is to be given. A dry, hard, and closely-balled condition of the excrement,

with a darker colour than is normally the case, is indicative of a constipated state of the bowels; whilst on the other hand, looseness of the dung and the fact of its not being formed into balls, denote a more or less relaxed condition. In the former case, more bran mashes, green food, or carrots are required (according to the kind of food available); while if the dung is too loose, the quantity of laxative food must be reduced correspondingly.

## CHAPTER XI.

### WATERING.

A PLENTIFUL and sufficient supply of water is absolutely necessary to the well-being of horses; they should therefore always be given as much as they want to drink, and must never be kept short of it. It is only in certain cases of illness that an exception may be made to this rule, should the veterinary surgeon direct that the patient be kept short of water. Grooms very frequently limit the amount of water they allow a horse to drink, owing to sheer ignorance and mistaken ideas about obtaining and retaining hard condition. Such a proceeding is not compatible with perfect health, and leads to feverishness and constipation, besides being nothing less than cruel.

The best and most satisfactory mode of watering horses is to let them have permanent access to water while in the stable, by placing a bucketful within their reach. In many stables a special receptacle for water is provided in the manger fittings; but instead of filling this with water, it is a much better plan to use a metal pail that will fit into the receptacle, and to put the water into it. If this is done, it is much easier to change and renew the water-supply than if the receptacle itself were filled with the water, as the latter is difficult to keep clean. If there is no special receptacle in the manger fittings, it is easy to fix a pail or bucket in one corner in such a manner that it can readily be removed. The bucket requires to be emptied

and refilled at least thrice a day, and should be filled oftener if necessary. As it is essential to provide wholly fresh water three times daily, it will not do to fill up the bucket by pouring water into it if it is halfemptied: the old water should be poured away.

Though the mode of watering horses as just described is in all cases to be recommended as being the most satisfactory from every point of view, yet it is not adopted in many well-managed stables, the horses being watered at certain times during the day only, and not having a permanent supply before them. This second plan is very general, in fact much commoner than the first-mentioned method. Should, for some fancied reason or other, the second plan be preferred, the horses should be offered water at least four times a day, though it would be better to do so oftener than this. They should, moreover, be watered before feeding them on corn, as, if they are not given any water until after having consumed their oats, and then drink a large quantity, some of the corn is washed out of the stomach into the intestines before it has undergone proper gastric digestion. A small quantity of water drunk after having eaten his corn, is in no wise harmful to the horse, and there is no objection to offering a horse the bucket after he has consumed his feed of oats, if he has been allowed to quench his thirst before feeding. He will then at most only drink a few gulps. Many horses consume their food more readily and with greater relish if they can drink a mouthful or two of water while they are feeding: hence it is a good plan to leave the filled bucket standing beside them during feeding-time.

Horses should not be allowed to drink a large quantity of water just before leaving the stable if they are required to do fast work (*i.e.*, trotting or galloping), as this would greatly inconvenience them, and may induce scouring. They should therefore be fully watered a couple of hours or more before leaving the stable.

The remarks just made as to the expediency of not watering horses after having eaten their corn, or just

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before they leave the stable to do fast work, do not apply where the plan of letting horses have continual access to water is followed. In this case a horse never gets very thirsty in the stable, because he can drink whenever he wants to, and consequently he never drinks much water at a time, as he does when watered only at certain stated intervals during the day.

During journeys of any length, advantage should always be taken of any convenience to let the horse quench his thirst, this especially applying to hunters that have any distance to go, after a run with the hounds, before getting home. There is no harm in letting a horse drink cold water, even when he is hot and perspiring, though much prejudice still exists against doing so. Similarly, when horses come into the stable after work, they should always be watered, even if they are in a heated state. As a rule, if they happen to be at all warm, they are left to cool down for an hour, or longer, before being allowed to quench their thirst. There is no necessity for doing this, as the plan of watering them directly they get in is in no wise hurtful: on the contrary, it refreshes the tired and thirsty animal, and gives him an appetite for his food, which he probably will reject until his thirst has been assuaged. If very thirsty and warm, the horse may be prevented from drinking too rapidly by letting him take a few gulps of water, then withdrawing the bucket for a minute or so, and then letting him drink some more, and again removing it, and so on till the bucket has been emptied.

Horses that have come into the stable in a hot state, and are not watered until they have cooled down for some time, often commence to shiver more or less violently after drinking the water, and the system appears to get chilled. But if they are given water immediately they come in, these fits of shivering are obviated, and the horses will be found to do much better.

It is not advisable, of course, to give large quantities of cold water to a very exhausted and heated hunter when he returns to the stable, but generally he will have

been walked home for some distance and be fairly cool, so that water may well be offered him.

As a rule, no regard need be paid to the temperature of the water supplied, but horses with delicate constitutions are sometimes upset by drinking very cold water in winter, scouring being induced thereby. In such cases it is advisable to take the chill off the water, more especially when they are warm from their work, by adding a little hot water. Warm water, or even tepid water, is distasteful to horses, and they will not drink it, as a rule, even if thirsty.

## CHAPTER XII.

### BEDDING.

THE provision of bedding material or litter in the stable is necessitated by considerations for the health and comfort of horses as well as by those of sanitation, and it is therefore essential to provide a sufficient supply, even though this entails a considerable amount of expense to horse-owners in most cases.

Without sufficient litter on which to lie comfortably and with ease, a horse does not obtain a thorough rest whilst lying down, this point being of especial importance in the case of hard-worked animals. Horses are also liable to hurt their hips, hocks, and fetlocks by lying on a hard floor insufficiently covered with bedding material, as the skin may be cut or become sore. They are further exposed to catching cold when reposing on cold floors, which rapidly absorb warmth from the body, as they are good conductors of heat, thus easily causing a chill in cold weather. In winter, therefore, a plentiful supply of bedding material is essential for purposes of warmth, as well as for the other reasons stated.

It will be readily recognised that it is more beneficial to the limbs, and that it tends to preserve their soundness, if horses stand on a soft and elastic material, such as straw or peat-moss litter during the daytime, than if they have to stand on the hard floor. The practice of not providing a good layer of litter during the day, and of obliging horses to stand on bare and cold floors, further chills the feet, and may give rise to that serious disease of the foot known as navicular disease.

Many horses are encouraged to lie down in the stall or box in the day, and this is, if the floor is well littered, of great benefit to them, especially to those horses that are tired by hard work.

From a sanitary point of view, the provision of ample litter is greatly to be desired, as it tends to keep the atmosphere in the stable pure, and free from ammonia and noxious gases given off by the horse's excrements. The bedding material, to a greater or less extent—according to what kind of litter is used—absorbs the urine, thus preventing its decomposition, which process entails the liberation of ammonia.

The principal materials for bedding purposes in the stable are straw and peat-moss litter. The latter is much used in towns, where straw is usually rather expensive, and peat-moss may therefore prove more economical to use. In the country, straw is generally more available, and cheaper.

Regarded as bedding materials, straw and peat-moss litter differ considerably from one another in regard to their qualities. Peat-moss possesses far greater absorptive power for liquids than does straw. The former absorbs from five to seven times its weight of water or urine, whereas the absorptive capacity of straw former absorbs from five to seven times its weight of liquid. Hence, more than double the weight of straw is required in order to obtain about the same amount of absorptive power, as in a given weight of peat-moss. Peat-moss, moreover, absorbs ammonia in the form of gas in a remarkable degree, and its use, therefore, especially tends to keep the air in the stable in a pure state, and free from ammonia. This fact is readily noticeable in stables where this material is used for bedding purposes, and regarded from the point of view of sanitation only, peat-moss is to be preferred to straw in averagely-managed stables.

Whilst peat-moss absorbs all the urine in a perfect manner, much of the liquid voidings of the horse drain through the straw on to the hard floor, unless a very large quantity is provided when this material is employed for littering purposes. As a consequence of this,

we find that the floor of the stall or box is kept much drier when the horses are bedded down with peat-moss than where straw is used.

Damp stables are also kept drier by using peat-moss litter, as this absorbs the moisture in the air to a considerable extent.

As far as concerns the comfort of the horse, there is little to choose between either one or the other material, if they are supplied in sufficient quantities. Peat-moss, however, has one drawback in that it is liable to ball in the feet, and become caked; this may entail injurious consequences by heating the feet, unless care be bestowed on picking out the feet every time the horse is groomed.

In practice, the question whether peat-moss or straw is to be used in the stable will, in most cases, be decided by the comparative cost of the two materials, and by the fact which is the more economical to use.

Straw looks more pleasing on account of its light colour than does the dark-coloured peat-moss litter, and in some stables this is a consideration. Moreover, it can be banked-up against the partitions of the stalls or the walls of the boxes, which cannot be done where peat-moss is used.

The advantages of straw and those of peat-moss may be utilised at the same time by employing both materials for bedding purposes. If this is done, a layer of peat-moss should first be placed on the floor, putting a more or less thick layer of straw on top of it. Such a composite bedding answers all sanitary requirements more satisfactorily than does a bedding composed of only either the one or the other material.

As regards straw for littering purposes, wheat-straw is the best, being toughest and most elastic. This kind is usually employed in town stables. In the country, barley-straw is also available, but it does not make so good a bedding, although possessing somewhat greater absorptive powers than wheat-straw. When consumed in appreciable quantities by horses that are given to eating their litter, barley-straw is more liable to cause digestive disturbances than wheat-straw. Oat-straw is

also inferior for littering purposes, and, owing to its comparative softness, it quickly becomes soiled and dirty. As a food-stuff, it is, however, the best kind of straw, and in the country it is usually reserved for stock-feeding.

In preparing the bedding, the straw should be well shaken up and evenly distributed over the floor of the stall or box. The litter should be arranged in two layers, if sufficient straw is available; in the lower layer, the straws should lie longitudinally along the floor of the stall, whilst the straws composing the top layer should lie transversely across it. The straw should be banked-up against the partitions at the side, if there is a sufficient quantity to allow of this being done, especially if the stalls are narrow, as it serves to protect the limbs from getting injured by being knocked against the wooden partition. The amount of straw to use may vary greatly, and depends upon the question of expense, especially in towns. The greater the allowance of straw for bedding purposes the better; and the same remark applies to peat-moss litter.

Grooms are often extravagant with the straw if they have a free hand and are not supervised by the owner, being prone to remove a considerable quantity of comparatively clean litter along with the dirty portions, when "mucking-out." Where economy is an object this form of waste should be discouraged.

Dirty and saturated litter is very injurious to the feet of horses, as it has a softening and decomposing action on the horn of the hoof, due to the ammonia and moisture. Moreover, dirty litter is a frequent cause of thrush in the frog of the foot, and cracked heels may also be caused. Further, the air is much contaminated where straw saturated with urine is left lying in the stalls. It is, therefore, highly important to keep the bedding in a clean state, and to remove all dirty portions daily, adding a supply of fresh straw or peat-moss at night when bedding-up the horses.

If possible, the dung should be removed from the stall or box by means of a skep as soon as it is voided,

this plan largely assisting in keeping the bedding clean.

Occasionally saw-dust is utilised for bedding-down horses, and in the neighbourhood of saw-mills it may, perhaps, be obtained at a low cost, and prove more economical than either straw or peat-moss.

## CHAPTER XIII.

### GROOMING.

THE operation of grooming not only improves the appearance of the coat by producing a gloss and keeping it clean, but it also has a beneficial effect on the skin and the general health of horses. Grooming, when vigorously performed, increases the action of the skin and opens the pores, thus promoting the removal from the system of the carbonic acid and other deleterious products in the circulation via the skin. The importance of thorough grooming on account of hygienic considerations increases with the amount of fast work that horses are called upon to perform. A plentiful stimulation of the skin is further of great benefit to horses that are highly fed on rich and heating food, and are insufficiently exercised, as it counteracts the injurious results of want of exercise to a limited extent. Racehorses in training and hunters require a great deal of grooming if they are to be brought to, and kept in, the highest state of condition. In the case of harness horses, hacks, trappers, and cobs or ponies used for ordinary riding or driving purposes, a certain amount of grooming is necessary in order to keep them in good health, and to enable them to perform their work in an efficient manner, but they do not require as much grooming as hunters in hard condition.

The tools used in grooming are the following: (1) the body-brush; (2) the dandy-brush; (3) the water-brush; (4) the curry-comb; (5) the mane-comb; and (6)

the hoof-picker. In addition to these, there are the sweat-scraper, sponges, stable rubbers, and hay-wisps, or pads.

The body-brush is the principal grooming tool, as it is the chief means of cleaning the coat and producing a gloss. Body-brushes vary a great deal in quality, price, and length of bristles. It is much more economical to buy one of really good quality, even if the price be high, than a cheap one. Good brushes will last for a great length of time. Those with short bristles are harder and clean the coat better than those that have longer bristles, and are consequently soft. In the case of fine-skinned horses, whose skin is very sensitive, brushes with too short bristles should not be used, and longer bristles are preferable, so as not to irritate the horse.

The dandy-brush has long whisk fibres, and is used for giving the horses their first brush down if the coat is dirty or the hairs have become caked together with sweat. In grooming short-coated horses, whose coats are comparatively clean, the dandy-brush should not be employed.

The curry-comb ought not to be actually applied to the body of the horse, except in the case of those animals which possess a very long and thick winter coat. As a general rule, the sole function of the curry-comb is to serve for cleaning the body-brush.

The body-brush is applied after the horse has been brushed down with the dandy-brush, should this have been necessary. Its application should be in the direction in which the hairs run, and, after every two or three strokes with it, the groom should run it over the curry-comb, so as to remove the scurf and dirt. From time to time the dirt in the curry-comb is got rid of by tapping the latter on the ground or floor of the stable. In order to make the application of the body-brush as effectual as possible, the groom must not stand quite close to the horse, but slightly away from it, leaning forward with his body so as to assist and increase the work of his arms with the weight of the body.

The water-brush—on account of its size and shape—is the best implement for brushing the head and the lower part of the legs, while it is also used—as implied by the name—for washing the latter, and for applying in a damp state to the mane, in order to lay it flat. As water-brushes are required to be used both in a dry state and when wetted, a set of grooming tools should include two brushes of this description.

The mane should be daily combed with the mane-comb, and the roots further require to be brushed thoroughly with either the dandy- or the dry water-brush, the same brushes being also used for brushing the tail. After brushing, the latter is carefully combed, taking care not to pull out any hairs. The dock of the tail and the parts covered by it must be wiped with a stable-rubber every day, and should be sponged with a damp sponge twice a week. The eyes, lips, and nostrils require to be sponged once a day.

After the horse has been brushed with the body-brush, his head and legs have been cleaned, and his mane and tail attended to, he should be gone over with a stable-rubber or a pad of hay, taking care to rub the head as well as the body. If an extra and special gloss on the coat is desired, it should be well rubbed with the palms of the hands in a vigorous manner, after the body-brush has been used, being finally gone over with a stable-rubber.

The dandy-brush serves only to remove actual dirt. The friction of the skin is performed by means of the body-brush, and also by the hay-pad or stable-rubber.

When the rug or sheet is put on the horse after grooming, it must be placed well forward on the back, being then pulled back towards the tail until it is in the right position. If it is pulled forward towards the head, the coat will become disarranged. On removing clothing from the horse, it should be pulled away backwards over the tail.

The feet must be picked out once a day with the hoof-picker, as well as every time the horse comes in from work or exercise, so as to remove any stones that may have become wedged in the foot. The hoofs are

best cleaned with a small, hard brush specially provided for the purpose. It is a bad practice to wash them regularly, though the walls of the hoofs may be wiped with a damp sponge if necessary. Special attention should be paid to keeping the cleft of the frog clean and free from dung, in order to prevent the appearance of thrush as far as possible.

In order to ensure a good appearance of the mane, and to make it lie flat against the neck, it must from time to time be thinned by pulling; on no account must it be cut with scissors.

In looking over a horse to see if he is properly groomed, attention should be directed to the ears, the head (especially in the space between the branches of the lower-jaw), the belly, and the hollow of the pasterns, as these parts are most liable to be left dirty by a lazy or incompetent groom.

One thorough grooming a day is sufficient for all ordinary purposes; but if great stress is laid on a short and glossy coat, a light second grooming is useful. Grooming is usually performed in the morning. It is a better plan to groom the horse thoroughly an hour after he comes in from work, or as soon as he is dry. If this is done, a slight grooming the following morning is necessary, but need not occupy much time.

Prior to taking out a horse, he ought to be gone over with a stable-rubber, so as to remove any dust that may have settled on the coat; and his mane should be laid flat by lightly applying the damp water-brush.

The sweat-scraper is used to scrape the sweat and dirt off a horse's body, when the animal comes in wet and dirty from work. He should be subsequently well rubbed down with straw wisps to get his coat as dry as possible, and then covered with a wool rug. Should sufficient labour not be available to admit of horses being rubbed down when they come in wet, it will be sufficient to put a rug on them, after letting them steam for about five minutes. When their coats are dry, they can be groomed in the ordinary way; but the rubbing down of sweating horses is certainly a very

good practice, and should be resorted to whenever practicable.

The washing of the legs and feet when a horse comes in dirty from work is not a practice to be recommended, and, besides involving useless trouble, it is frequently the cause of mud-fever in those horses that are liable to suffer from the complaint. On a horse coming in with legs splashed with mud, this may be rubbed off as far as possible with wisps of straw, but nothing further is needed. The legs should be left to dry, and can then be easily cleaned by brushing off the dried mud with a dandy- or water-brush. If wished, the drying process may be accelerated and the legs be kept warm by putting on flannel bandages very loosely, removing them after about an hour.

## CHAPTER XIV.

### CLOTHING AND BANDAGING.

THE practice of providing clothing for horses is primarily intended to keep them sufficiently warm in the stable, while it further answers the subsidiary purposes of keeping the coat more or less short and thin, and of preventing dust from settling on it. During the summer clothing also acts as a protection against the flies. Further, the changing of the coat in spring is much accelerated, and the horses get their summer coats earlier in the season if they are warmly clothed, which is a great advantage where animals doing fast work are concerned.

The amount of clothing put on a horse should be regulated by the season of the year, more clothing being naturally required during the winter than is necessary in the spring or autumn. In the summer the clothing should be very light and thin, its main object then being to keep the coat clean, and prevent the flies from worrying the horses, rather than to give warmth. After they have been clipped, horses of course require to be more heavily clothed than they have been previous to the removal of their winter coat.

An adequate supply of clothing does away with the necessity of keeping the air in the stable at a higher temperature than is desirable from a hygienic point of view, a high temperature generally meaning a close and stuffy stable. If the horses are kept nice and warm

by clothing them, this will allow of the stable being well aired and freely ventilated, without there being any danger of their getting chilled.

Horse-clothing is made of a variety of materials—either wool, or what passes for wool, cotton, jute, and linen. Woollen clothing varies greatly as regards its quality and weight (or thickness), and consequently also in price. It is, as a rule, made either of Kersey or of fawn Witney blanketing, but the latter is sometimes some other colour than fawn. The former material is more expensive, and is considered to look better than the latter, while it also lasts longer and wears better; but as regards warmth-giving properties, it is in no wise superior to Witney blanketing, supposing the clothing to be of equal weight in both cases. Jaeger's horse-clothing, which is made of pure wool, is very suitable from a hygienic point of view. Cotton clothing, the colour of which is generally some kind of check or other, is intended for use in the summer, but it is not suitable during any other season. In very hot weather, and when clothing is employed solely for the purpose of keeping the coat free from dust, and to prevent the attacks of flies, that made of linen serves very well.

The complete suit of clothing includes a sheet (or body-cloth), a hood, a roller, and a pad-cloth (or roller cloth), but a full suit is not, as a general rule, required. A hood can be dispensed with in the stable, although in very cold weather it may suitably be worn by the horse. It is useful for putting on when the horse is sent to the forge in winter (forges frequently being draughty places), and also when he has to travel by rail. The pad-cloth is not an essential part of the clothing; it is intended to protect the sheet or rug from being worn by the pad of the roller. The body-sheet may either consist of two parts, viz., the quarter-sheet and the breast-cloth, the latter covering the horse's breast, and being buckled on to the former on either side of the body, just below the withers; or it may be made of one piece. In the latter case it is usually termed a "rug," and is cut out at the neck and made to buckle in front of the horse's breast. Such rugs are

most generally employed—especially as regards Witney blanketing—when complete suits of clothing are not purchased.

Instead of using a cut-out rug for clothing horses, a simple square blanket may be employed; but these do not fit well at the neck, and leave the breast unprotected, hence they are not very suitable, though they are very useful as under-rugs, to be worn underneath a cut-out rug or a quarter-sheet.

A strap or buckle may be sewn on to a square blanket to allow of its being secured in front of the horse's breast, but such an arrangement is, at the best, a makeshift, and much inferior to a properly cut-out rug.

In the winter, and when horses are clipped, it will generally be advisable, if not necessary, to use two rugs at the same time. It is preferable to put on two sheets of medium thickness rather than one very heavy one. Three rugs or blankets will rarely be required, except in very cold weather and should the stable be extremely cold.

Many grooms are addicted to the practice of clothing horses more heavily than is necessary to keep them adequately warm, with a view to keeping the coat as short as possible and getting a good gloss on it, which of course saves them a great deal of trouble in grooming. This practice should not be allowed, as it has an injurious effect on the health of horses, and renders them very liable to catch cold when they leave the stable, more especially if they have to stand about outside in the cold.

It is a good plan to provide separate day- and night-clothing; but care must be taken in this case to see that a horse is clothed just as warmly during the night as in the daytime.

By having two sets of clothing in use at the same time, the rugs or blankets can be kept well aired and thoroughly dry, which cannot always be done if the same clothing has to be worn both during the day and at night. Unless frequently exposed to the air, and dried either in the sun or wind or before a fire, it is

not possible to keep clothing in a satisfactory condition, as it becomes damp and sticky, losing its porous character, and it then is neither very warm nor healthy, checking, as it does, the exhalations from the skin. From time to time woollen rugs and blankets require to be well beaten, while summer clothing can be washed when necessary.

As the clothing is very liable to become soiled or dirtied when the horses lie down at night, there is a further reason for providing separate sets for day and night use, as good and clean rugs or sheets would soon get spoiled if left on during the night. Jute rugs, which are usually wool-lined, are very suitable for night use, and are much employed for this purpose. They are of course not so warm as equally heavy woollen clothing, and allowance must accordingly be made for this fact by putting on sufficiently heavy rugs or blankets in addition to the jute rug, in order to ensure the same degree of warmth as during the day, or slightly more.

When horses come in wet from work, and it is not practicable to rub them dry with straw wisps, a woollen rug or blanket (or a couple of these if required) should be thrown over their backs after they have steamed for about five minutes without any clothing on. The moisture in the coat will soon be absorbed by the clothing, and the coat will become dry. The damp rug or rugs must then be removed, and dry clothing substituted. The rugs or blankets used at night (but not the jute rug) will come in very handy for putting on the horses when they return to the stable in a wet state, and until their coats are dry, as they can be dried again before being required for the night.

In very cold weather, and should the stable be cold, flannel bandages may be loosely put on the legs for purposes of warmth, but they must on no account be put on tightly under such conditions. Similarly, they may be made use of for drying the legs, should these be wet on the horse coming in from work or exercise; in this case, too, the legs must only be loosely bandaged. As soon as the legs have dried, which will be

in the course of about an hour, the bandages should be removed. So far as concerns ordinary trappers, cobs, and ponies, the bandaging of the legs in order to dry them is not at all necessary.

When sending horses—and especially young ones—by rail, the legs may suitably be bandaged, in order to protect them from possible injuries, which might easily occur.

Flannel bandages are the best for ordinary stable use, while those made of linen are not at all to be recommended, except when it is necessary to apply wet bandages in certain cases of lameness; under such conditions, these latter are the most suitable.

One of the principal reasons for bandaging horses' legs is to keep them "fine" and prevent their filling, and also to reduce wind-galls above and about the fetlock joints. When put on for this purpose, the bandages require to be wound round the legs rather tightly in order to exert a sufficient amount of pressure. They should either be removed entirely before the night, or be re-applied more loosely, the legs being well hand-rubbed in an *upward* direction on their removal for the space of five minutes or so.

It must be understood, however, that bandaging does not cure legs that are naturally weak and inclined to "fill" after work, and which suffer from puffiness and windgalls about the fetlocks; it merely acts as a preventive measure, and keeps the legs fine for the time being only. No amount of bandaging can effect any permanent improvement in the case of such worn or weak legs.

Prior to being applied to the legs, the bandages require to be rolled up, beginning at the end where the tapes are sewn on; the latter must be in the centre of the rolled-up bandage. There are more ways than one of putting on a bandage in a correct manner. We may start to bandage at the middle of the cannon, wind down the leg, and round the fetlock-joint, then bring the folds of the bandage up the leg until it is just below the knee, finally bringing it downwards again to about the centre of the cannon. Or we may commence

slightly below the knee, run the folds downwards as before, and then bring it up again, finishing at the place where we started. The tapes are tied either in front of the cannon-bone or on the outside side of the leg, being done up in a double bow.

If properly put on, none of the folds should be creased, nor is any twisting of the bandage necessary. In order to prevent the bandage from getting loosened and thus slipping, the end which is first wound round the leg should not be covered up immediately by the succeeding folds, but a few inches should be left free until two or three folds have been made. The end is then lapped over these folds, and covered later on, when the bandage is brought up the leg, so that it is firmly secured between the folds of the bandage, instead of lying against the skin of the limb.

## CHAPTER XV.

### EXERCISING.

IT is of the utmost importance that horses which are stabled and fed on hard corn should be given an adequate amount of exercise and work, as without it they cannot be kept in health.

Horses that are insufficiently worked or exercised suffer from loss of appetite, and their legs are very liable to "fill," or become swollen, which permanently impairs the strength of the limbs, besides looking very unsightly and detracting from the appearance of a horse.

Without a sufficient amount of exercise it is impossible to attain and maintain a satisfactory working condition in horses, and they become fat, and sweat very easily, while their muscles remain undeveloped and flabby, and the tendons and ligaments of the legs are not able to stand much strain without being injuriously affected. Thus it is that we find that the limbs of horses which are irregularly worked at fast paces, and which are not kept in working condition by being given plenty of daily exercise, wear out more quickly than do those of animals which are regularly exercised, and consequently are in more or less hard condition. Hard condition, which is attained by the combined effects of judicious exercise and feeding on hard corn, is absolutely essential in horses if they are to perform their work with ease and without being unduly fatigued. The more exercise a horse is given—

within reasonable limits, of course—the more fitted will he be to undergo hard work, and the less will he feel the effects of fatigue. Thus, a horse that is in hard condition is able to perform work with ease which would greatly distress, or even entirely knock up, an animal which is kept short of exercise, and remains standing idle in the stable for the major part of the week.

The beneficial effects of regular exercise may shortly be summarised as follows: (1) the general health is maintained; (2) the appetite is kept in a normal state; (3) the horses are kept in proper working condition; (4) the legs keep fine; (5) the horses wear better and last longer.

Regularity of exercise is very important: that is to say, horses require to be taken out *daily* for a sufficiently long time during the week, as it is only by regular exercise that they can be kept in working condition. Nothing is more calculated to wear out a horse than irregular and spasmodic work, such as is the case when horses are left standing idle in the stable for a couple of days or more, then worked hard for a day or two, and after that again given a complete rest, and so on.

The amount of exercise given to horses will in a large measure be dependent upon the time the owner and his coachman or groom have at their disposal for taking the horses out, hence it is useless to lay down hard-and-fast rules. Moreover, horses that are only moderately worked all the year round do not require to be in such hard working condition as those that are called upon to perform really severe work very frequently, and therefore the former may well do with less exercise than the latter.

In order to have a rough guide to go by, we may take it that the most suitable amount of exercise for average riding-horses and harness animals of various descriptions is about three hours daily, with one day's rest once in seven days; but in many cases it may not be practicable to give them as much as this. If the horses are put to extra severe work one day, the period of exer-

cise should be shortened, more or less, the succeeding day or days.

It will have been gathered from the remarks made above that it is much to be preferred to take a horse out daily for a shorter time rather than to exercise or work him for a longer period on alternate days, and to give him three complete days of rest in the week.

When horses are exercised merely for the sake of giving them exercise, they should be worked at a walking pace and at a slow trot, these two paces alternating with one another. It is not necessary that they should be cantered, or even galloped, especially not when ridden by grooms, who are often ignorant, and apt to gallop horses too much and on hard ground. The owner, when riding his horses, will of course give them occasional gallops, and canter them when the ground is sufficiently soft, so as to keep their breathing organs in a fit state. When using harness horses, the owner should drive them at a smart trot.

Two or three hours of exercise at slow paces are far more beneficial than half that amount of exercise at faster paces, speaking in a general way. Thus it would be wrong to think that the length of time during which a horse is exercised may be shortened if the pace is increased proportionately. This is far from being the case, and such a proceeding cannot fail to be harmful. Whilst plenty of exercise at slow paces tends to preserve the legs in a sound state, too much work at fast paces is injurious to them, and wears them out at a more or less rapid rate. As a rule, horses will get a sufficient amount of fast work when ridden or driven by the owner; hence it is all the more necessary that the groom, when exercising the horses, should work them at a walk and medium trotting pace.

A groom can very well exercise two horses at the same time by leading one animal alongside the horse he is riding. If the animals are quiet and the groom is a competent horseman, he may even lead two horses, thus exercising three at a time. Harness horses may be exercised in harness, but they should be kept as much as possible on soft ground, as work on hard roads is not

beneficial to the limbs. As it is difficult to find suitable soft ground on which to drive horses, it is very frequently to be preferred to exercise harness horses under the saddle, with a view to keeping them on soft ground as much as possible.

When ridden by a groom, a horse should in all cases be bitted with an ordinary snaffle that has a fairly thick mouthpiece, as there is least danger of his mouth being spoiled with this kind of bit, should the groom be a poor horseman and have clumsy hands. Unless he is a really experienced rider, and possesses intelligence, a groom ought not to be allowed to ride a horse in a curb-bit, as he might easily spoil an animal's mouth and manners by doing so. Should he of necessity have to use a double bridle—as, for instance, when riding a second horse when hunting—it should be seen that the curb-chain is not hooked in too tightly, as grooms are very fond of doing, but that at least three fingers can be placed between it and the horse's jaw.

In the case of cobs and ponies used for trapping purposes, and in which a perfectly-groomed appearance or a very glossy and bright coat are not required, the difficulty of giving them a sufficiency of exercise and plenty of fresh air may readily be solved by letting them have a few hours' run in a paddock every day if the weather is suitable. If accustomed to clothing in the stable, they must be provided with a rug while turned out, preferably a jute rug, as they may spoil a good blanket when rolling on the ground.

## CHAPTER XVI. SHOEING.

THE visible parts of a horse's foot are: (1) the wall; (2) the sole; (3) the frog; and (4) the bars (as shown in Fig. 7). The wall is that part of the hoof which is visible when the foot is placed on the ground. The sole covers the lower or ground-surface of the foot, and is only seen when the latter is taken off the ground. The

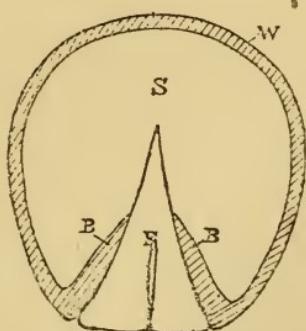


FIG. 7.—DIAGRAM SHOWING PARTS OF HOOF (GROUND SURFACE).  
w, Wall ; s, Sole ; f, Frog ; b, b, Bars.

frog is the triangular pad of soft horn that protrudes from the sole, its base being at the heels and its apex extending towards the front of the foot. The bars are a continuation of the outer wall, consisting of those parts of the wall which are doubled in at the heels, and run parallel with the sides of the frog.

The anterior portion of the foot is termed "the toe," the posterior part is designated "the heel," whilst the sides of the foot are referred to as "the quarters."

It is often assumed that the sole reason for having a horse re-shod consists in the fact of his shoes being worn out. This, however, is not the only reason, as reshoing or a fresh adjustment of the old shoes is rendered necessary after a certain time, owing to the continual growth of the horn of the hoof. As the shoes protect the horn from being worn away, the foot becomes overgrown, and loses its proper shape after some time, and it is then necessary to pare away some of the horn of the wall in order to reduce the latter to its normal proportions.

Should no shoes be worn, and the animal be worked on hard ground or on metalled roads, the horn is worn away at a much quicker rate than is compensated for by its growth, while the wall is also very liable to be split and broken at its lower margin. As a result of this, the horse goes tender after a short time when worked without any shoes, and finally becomes lame, owing to the sensitive structures of the foot being exposed.

It may be taken as a general rule that a horse should be re-shod or have his old shoes re-adjusted every month. Young horses, in which the horn of the hoof grows at a more rapid rate than is the case in mature animals, should be sent to the forge every three weeks. On certain kinds of roads, which are especially destructive to iron shoes, and when horses do a large amount of work, the shoes may wear out so quickly that it is necessary to replace them much more frequently than every four weeks. If, on the other hand, the horse does but little work, and that chiefly on soft ground, the shoes may hardly require replacing at the end of four weeks; but the horn of the wall will, in any case, have become overgrown at some part or other, and require to be pared, and a re-adjustment of the shoes will therefore be necessary.

Neglect of sending a horse to the forge at the proper time may, and frequently does, give rise to 'corns' and

subsequent lameness, while it has an injurious effect on the limbs in all cases, because a greater strain is thrown on them when the hoof is overgrown than is the case when it is normally proportioned. Horses with overgrown toes are further very liable to stumble.

In regard to overgrown feet, it must be pointed out that it is only the wall which becomes overgrown when it is not subjected to wear, or pared away from time to time. The sole and the frog of the foot do not become overgrown, because the horn of these parts flakes off on its own account after it has attained a certain thickness. The horn of the wall, on the other hand, continues to grow longer indefinitely, unless it is reduced by wear or pared when the horse is shod.

In shoeing a healthy and normally shaped foot, the following six points are the principal ones that require attention: First, only the wall of the foot and that part of the sole which is immediately adjacent to the wall must be pared; the sole and the frog should not be touched with the knife. Secondly, the bars at the part nearest the heels should not be pared more than is necessary to make them level with the outer wall, whilst the anterior part of the bars must not be cut away at all. Thirdly, a level bearing-surface should be obtained, so that the wall touches the shoe around its entire circumference. Fourthly, the shoe should be sufficiently large and wide, so that the wall does not protrude beyond the outer margin of the shoe at any point. (In the case of horses that go very close with their feet, either in front or behind, and consequently brush, or are liable to do so, an exception to this rule may be necessitated.) Fifthly, the shoes must not be too short at the heels. Sixthly, that part of the wall which is visible when the foot is on the ground (*i.e.*, the outer surface) must not be rasped. It is difficult to avoid doing so to a certain extent when the clenches are being filed down after the shoe has been nailed on, but a careful shoeing-smith ought to touch the outer surface of the wall as little as possible when the clenches are laid down.

It may safely be said that in nine cases out of ten

several, or all, of the rules enumerated above are not attended to by average shoeing-smiths, unless the owner himself takes the trouble to watch his horses being shod.

To pare the horn of the frog in any way is one of the worst things that can be done, as this not only prevents the frog from coming into contact with the ground, but also causes it to shrivel up more or less, and leads to the contraction of the heels. The frog is a very important organ of the foot, acting—provided it is well developed—like a pad or elastic buffer to the latter when it is placed on the ground during the progression of the horse. It thus counteracts to some extent the evils of concussion on hard ground, and a well-grown frog, which comes in contact with the ground, and receives some share of the horse's weight during movement, therefore tends to preserve the limbs in a sound state. But a well-developed frog can only be obtained in a shod foot if it is not pared, and if it takes a proper bearing on the ground. Should the frog, from some cause or other, not touch the ground, it gets smaller and contracts, and then of course is not able to perform its natural function of acting as a buffer to the foot.

The cutting away of the bars of the hoof leads to a contraction of the heels, and impairs the good shape of the foot. The paring out of the sole renders it needlessly tender and liable to be bruised should the horse tread on a sharp stone.

In regard to the necessity of having the shoes sufficiently large and wide, it may be noted that shoeing-smiths are often apt to make them rather small, and then to rasp away sufficient horn of the wall after the shoe has been nailed on, so as to make the wall flush with the outer margin of the shoes; this is done with a view to giving the foot a neat appearance after shoeing.

The rasping of the outside wall is a practice which should not be tolerated, as it is injurious to the hoof and weakens it. The strongest horn-fibres of the wall are nearest the surface, and serve both as sources of strength to the wall and to protect the fibres underneath, which consist of soft horn. When the wall is rasped, the

outside fibres are removed, the wall thus being weakened, and softer horn being exposed. This latter is much more readily affected by the deleterious influence which wet has on horn by rendering it soft. We have further to note that the outside wall is naturally covered by a thin film or layer of a glue-like substance, which protects the wall from the injurious effects of wet, and prevents it from getting brittle and breaking: hence it ought not to be removed by rasping.

Both shoes which are too narrow and those which are too short at the heels are causes of corns, especially in the case of those horses which are liable to suffer from them.

Care should in all cases be taken to see that the ends of the heels of the shoe are quite flush with the rear-most point of the heels of the foot, or slightly longer. They must not be shorter. As some horses are liable to pull off their fore-shoes by treading on the heels with their hind-feet when jumping or galloping, the fore-shoes require to be made as short at the heels as possible in such cases, but they should not be made so short as to induce corns.

Owing to the continual growth of the wall, the perfect fit of a newly-applied shoe is not preserved for any length of time, and consequently shoes that have been on the feet for, say, three or four weeks, do not fit properly, even if they have been correctly fitted to begin with.

The shoes should not be too heavy, as they will needlessly weight the feet if made heavier than is necessary to meet the requirements of wear.

The shod feet require to be examined daily, to see whether any of the shoes have become loosened. This is best done when the feet are looked at after the horse comes in from work or exercise, or when they are picked out at grooming-time. If a horse is worked with a loosened shoe, the latter is not only liable to be cast altogether, but it may get displaced, and then cut the opposite limb rather badly.

Occasionally, the fore-feet of horses are shod with tips, instead of with the ordinary pattern of shoe. Tips

are shortened shoes, and protect the anterior part of the foot only, while the back part is left uncovered. They may usefully be applied to the fore-feet of horses that are worked chiefly on soft ground, such as hacks, for instance. By using this form of shoe, the development of the frog is promoted, because it takes a better and more complete bearing on the ground than if the foot is shod with an ordinary full-sized shoe. Tips must not be used indiscriminately, but are suitable only under certain conditions. Applied in appropriate cases, they are very beneficial, but if put on where they are out of place they may do harm.

When horses are turned out to grass, their hind-shoes should invariably be removed, and if they are turned out for any length of time—say, longer than a fortnight—the front-shoes also require to be taken off. Should the horse in question have weak and brittle feet, and the ground of the pasture in which he is turned out be very hard during dry weather in the summer, tips may be put on the fore-feet in order to protect the toes from being unduly worn; but if the horn is strong, this precaution is not necessary. It should only be adopted in the case of absolute necessity, as it is very beneficial to the feet if the horse goes bare-footed when at grass. Prior to turning the horse off, the rasp should be run round the sharp edge at the bottom of the wall of the hoofs so as to round it off. This to a great extent prevents the wall from splitting or breaking, which it is very liable to do if the edge is left sharp and not rounded off. A similar precaution should be taken when horses are led out for exercise or ridden without being shod.

The cleft of the frog (*i.e.*, the more or less deep depression which runs along its centre) should occasionally—say, once a week—be dressed with Stockholm tar, which will tend to prevent the appearance of thrush.

## CHAPTER XVII.

### CLIPPING.

IN the majority of cases, it is advisable and desirable to remove the winter coats of pleasure horses that are stabled and worked, by clipping them. In some instances it is possible to keep the winter coat of well-bred horses sufficiently short so as to do away with the necessity of removing it artificially, by natural means, that is to say by plentiful grooming and liberal feeding, by clothing, and by keeping the stable at a sufficiently high temperature. It must, however, be pointed out that this latter procedure is not as a rule to be recommended, and that by adopting these devices in order to secure shortness of coat the thing may easily be overdone, and injurious results be caused. The devices of keeping the coats of horses short by putting on too much clothing and by maintaining a high temperature in the stable are not legitimate ones, from the point of view of good stable management, and contrary to hygienic rules.

The disadvantages of allowing horses which are worked at paces faster than a walk to retain their winter coat—unless it be shorter and less heavy than is generally the case with the average pleasure horse or pony—are as follows: A horse with a long coat sweats easily and profusely on being subjected to the least exertion, and when required to trot at a fast pace, or to canter and gallop, he is unduly distressed in his breathing organs. Nor can a horse with his winter coat on

be kept in really good working condition, and he is much more quickly fatigued and tired out than if he were clipped. So far as the capacity of a horse for work is concerned, a clipped animal is able to perform a larger amount, and this with comparatively less exertion than one that is carrying a heavy winter coat. Further, it is difficult to get the coat dry again after the horse has been out and the former has become saturated with sweat. No amount of rubbing down will be effectual in drying if it is long, and it takes some hours before the horse becomes fairly dry; indeed, in many cases the coat keeps wet at certain parts throughout the night. This not only has a weakening effect on the horse, and lowers his condition, but it exposes him to catching cold. Finally, the labour of grooming is greatly increased, and even when this is thoroughly performed, it is difficult, if not impossible, to keep the skin in a clean state; the action of the skin, moreover, will be considerably retarded and decreased when the horse wears a long and heavy coat.

It is often assumed that the removal of the winter coat by clipping renders horses liable to catch cold more easily than if they are allowed to retain their coats. This is, however, erroneous. It is of course obvious that a clipped horse is not so well protected against the cold as an unclipped one, and also that the former is more liable to catch a chill than the latter if left standing out of doors for any length of time without a covering. But these facts do not constitute real drawbacks to the plan of clipping horses, because it goes without saying that if we remove the natural coat of a horse we must protect him against the effects of cold by artificial means—*i.e.*, by employing adequate clothing. If we do this, a clipped horse is at no disadvantage as regards a low temperature, compared with an unclipped one. Finally, there is the question of appearance. A horse which has been carefully clipped or singed looks much smarter than one carrying a heavy winter coat. In fact, the latter may be so thick and long as to look absolutely unsightly—a state of things which even the

most liberal amount of vigorous grooming will fail to remedy.

The removal of a horse's winter coat by means of the clipping machine should not be effected before its growth is completed, or until it is fully "set," to use the technical term. The exact time when this occurs varies to some extent in different horses. The end of October or the beginning of November may be taken as the average time of the year when the winter coat has "set." If the coat be removed by clipping prior to its growth having ceased, its appearance is spoilt more or less for the winter, although it is not disadvantageous to the horse in any other way. Very frequently it will be found necessary to clip the horse a second time in the course of the winter. The second clipping should not, however, be undertaken too late in the season, as, if this is done, the appearance of the subsequent summer coat, which is produced in the spring, will suffer, owing to its growing rather long and coarse under such circumstances. The last clipping should be performed towards the end of December, or, at any rate, not later than the beginning of January.

The amount of growth of the hairs after the coat has been clipped depends upon the temperature of the stable and the clothing put on a horse, as also on the way he is fed. If the stable is cold, or the horse is only lightly clothed, the coat grows more rapidly than if the temperature is kept at a higher degree, or the horse is well provided with clothing. Similarly, a liberal supply of corn means a less rapid growth of the hairs than if the animal in question is but poorly fed.

It is essential that an animal should be evenly and uniformly clipped, if he is to look well afterwards. Clipping is at present usually performed with hand horse-clipping machines, of which there are various makes on the market. Clark's clippers are among the best-known, and are in very general use. Power clipping machines are coming more and more into use in big establishments. These are much superior to hand-clippers, performing the operation far more expedit-

tiously, and entailing much less work, whilst it is possible to clip more evenly with them than is the case, as a rule, with hand-clipping machines. The best-known hand-power clipping machines are the following: (1) The Barton-Gillette (manufactured by the Barton-Gillette Horse Clipping and Sheep Shearing Co., Ltd., 103, New Oxford Street, London, W.C.); (2) The Stewart Patent Clipping Machine (the Chicago Flexible Shaft Co., 22, Denman Street, London, S.E.); (3) Clark's machine-clippers (528, Oxford Street, London, W.); (4) The Burman Power Clippers (Burman and Sons, Ltd., Lee Bank Works, Birmingham). The prices of these various makes range from £3 upwards.

In buying a hand-clipper, it is false economy to purchase cheap makes. A really reliable machine cannot be obtained under 8s. 6d., and 10s. 6d. is not by any means too high a price to pay. In clipping the lower parts of the horse's legs, it is advisable to use old machines that have lost one or two tines, because the machine may get damaged by the horse hitting it with his hoofs. The tines of the clipping machine are very easily broken off, and the breaking off of one means the leaving of a narrow ridge or stripe on the coat. Hence, clipping machines require careful treatment, and the knives must be sharpened from time to time, which is best done by the manufacturers.

When clipping a horse, a brush with fairly hard bristles is required, in order to brush the cut hair off the back of the machine from time to time, as it would otherwise become clogged. An old disused dandy brush is very suitable for this purpose. The machine also requires to be kept well lubricated, by occasionally dropping some oil on the plate during the clipping operation.

As regards the working of the clipping machine, proficiency herein can only be gained by practice. When the operation of clipping is performed by inexperienced persons, narrow ridges of hair are generally left all over the body, which look very unsightly. The left hand, which grasps the left handle of the machine, should not be moved from side to side at all, but should

be kept perfectly steady. This hand guides the clippers entirely. They must not be forced forwards too much when clipping the hair, as this will result in bad work. The working of the clippers is done solely by the right hand: this moves the right handle from side to side, causing the knives (which are on the upper plate of the machine) to work across the lower plate, and to cut the hairs as they are caught between the tines. The things to remember are: (1) that the working of the clippers is only done by the right hand; (2) that the left hand must be kept quite steady, and should not in any way move sideways; (3) that the guiding of the machine is performed by the left hand, and not by the right one; and (4) that the clippers must not be pushed along by force, but should move forward of themselves, as it were. The machine is of course moved in the direction opposite to that in which the hairs lie, otherwise it will not cut properly or not cut at all. It may be found necessary and advantageous to stand on a box or low stool when running the clippers over the back, loins, and croup in the case of full-sized horses.

The belly is somewhat difficult to clip, especially if the horse is not very quiet. It will be found useful to have a leg held up by an assistant in the latter case. In clipping the space between the fore-legs, one of these must be held up and pulled well forward, so as to draw the skin tight. It is impossible to clip loose skin properly, hence where it is not naturally sufficiently smooth to run the clippers over in a satisfactory manner, an assistant must be got to draw it tight. This is the case especially at the juncture of the head and neck, at the elbows, and also near the stifle joint and between the branches of the lower jaw.

Horses are frequently very fidgety about having their legs, and especially the hind limbs, clipped, and may cause much trouble. An assistant should hold up one fore-leg, to facilitate matters. In clipping the hind-legs, the fore-leg that is on the same side as the hind one being operated on should be held up.

A small pair of toilet clippers that are worked with one hand are very handy and useful for clipping the

heads of horses that are fidgety about having their heads touched. With quiet horses the ordinary-sized machines answer perfectly well.

Whilst clipping a horse, he must stand in a sheltered place free from draughts, and those parts of the body which have been denuded of their hair must be kept covered with a rug, as otherwise the horse may easily catch a chill.

The ears should not be clipped on the inside, as is often done. All that is necessary is to fold up the ear so that the edges lie close together in a straight line, and then to cut the protruding hairs away with a pair of scissors. The outside of the ears is clipped by getting an assistant to spread the ear out flat.

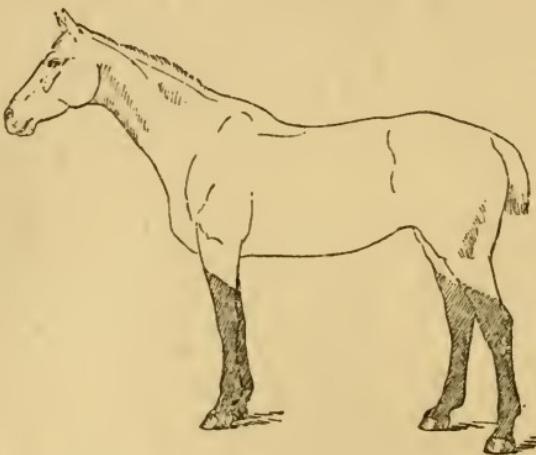


FIG. 8.—METHOD OF CLIPPING HUNTERS.

So far as appearances go, it is best to clip the whole of the horse's body and the limbs. In saddle horses, that part of the back on which the saddle is placed is frequently left unclipped. In many horses this prevents their getting sore backs, which they might do if the saddle were placed on the clipped skin.

In leaving the hair unclipped on that part of the back on which the saddle rests, the saddle is put on the

horse when his body is being clipped; and it will then be comparatively easy to leave unclipped a patch of skin corresponding in shape to that of the saddle, simply by clipping around the latter, but leaving a margin of 1in. or 1½in. of the coat protruding beyond the edge of the saddle round its entire area. If this is done neatly, the appearance of the horse when saddled will not in any way be detracted from by not removing the hair under the saddle. Hunters are generally clipped in this fashion. In their case it is also very usual not to clip the legs, but to leave the hair on up to about 5in. to 7in. above the knees and hocks. The unclipped and clipped portions should join in a sloping line, as shown in the illustration. Of course, horses with their limbs unclipped look less smart than those which have them clipped; but the former plan should always be adopted for hunters and horses that are ridden over rough country, and are liable to get the skin of their legs torn or pricked by thorns, gorse, &c.

In the case of harness horses, it is not necessary to leave the hair on the legs. In some few cases the clipping of the legs may make a horse more liable to suffer from mud fever and cracked heels, but with good and thorough stable-management this should not happen. In any case, it is not at all advisable to cut away the hairs in the hollow of the pastern too closely, as grooms are very fond of doing in order to make the legs look neater and finer. This practice certainly is very conducive to causing cracked heels, and must not be countenanced.

After the clipping process is finished, the horse should be brushed down with a body brush, the head and legs being gone over with a dry water-brush. The animal may then be finished off by being singed.

## CHAPTER XVIII.

### SINGEING.

HORSES are singed by means of a special apparatus, of which there are various patterns on the market. Singeing-lamps may be intended for burning either gas, paraffin, or methylated spirits. Those that burn gas give the greatest heat; next follow the paraffin lamps; whilst those intended to burn methylated spirit have the weakest flame. The gas singeing apparatus has one advantage in that its flame can be regulated by turning the tap of the gas-jet to which the tube of the lamp is attached. Owing to its great heat when the gas is fully turned on, this kind of singeing-lamp, if carelessly employed, is more liable to injure the skin of the horse by burning than either a paraffin or a methylated spirit lamp.

A horse may be singed in order to reduce and shorten his coat, instead of clipping it. This plan, however, can only be carried out in the case of those animals that have not got a very thick or long winter coat. Singeing the coat in order to reduce it, moreover, demands greater skill on the part of the operating person than does clipping, if the horse is to look presentable subsequently. It also involves more trouble, because if the coat is to be kept short by singeing, the horse requires to be singed at frequent intervals. Contrary to what is the case when one is clipping a horse, singeing must be commenced as early as possible in the autumn, when the horse changes his coat. In any case,

singeing is not nearly so usual a method of shortening the winter coat as is clipping.

The operation of singeing is generally, and always should be, performed after a horse has been clipped with a clipping machine. It not only removes any long hairs that have been missed by the clippers, but also, to some extent, improves the look of a coat that has been badly and unevenly clipped. At the same time, it is a very bad plan to rely on the singeing-lamp to remedy the bad results of careless or incompetent clipping, as its effect in doing this is but very limited, and no amount of singeing will efface the ridges left on the coat when the clipping operation has been negligently carried out. These unsightly ridges will only disappear when the coat has had time to grow again. Horses that have had their coats reduced by clipping may of course be singed from time to time during the winter, if the growth of their coats requires it.

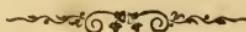
In singeing a horse, the apparatus is held in one hand, and a stable-rubber in the other; the latter is passed over the coat after the lamp has been run over it. Care must of course be exercised not to keep the flame on the same part of the skin for any length of time, as this would burn the horse. The lamp is passed rapidly and lightly over the coat in the same direction as that in which the hairs run. If necessary, it may be repeatedly run over the same place, but in no case must it be allowed to burn the skin.

Many grooms follow the pernicious practice of singeing away the hair inside the ears by means of a lighted candle, or even with a match. This cannot be condemned too severely, because the horse's ears very easily, and frequently do, get hurt by being burnt, as a consequence of which the horse is often rendered extremely shy of having his head touched or handled in the future. The hair on the inside of the ears should never be singed away. If properly done, and provided the horse is not burnt, there is no objection to singeing away the long, bristly hairs round about the muzzle and lower jaw; but if the horse be fidgety when his head is touched, this had better not be done, as it will only

tend to increase his nervousness for the future. The hairs just mentioned may suitably be reduced by cutting with a pair of stable scissors, which, if of the bent pattern, are very useful for trimming odd hairs about the head and feet when the horse is being clipped or singed.

It is a common practice to exercise horses at a fast pace immediately after they have been singed, so as to make them sweat profusely. On their return to the stable, the sweat is removed as far as possible with a sweat-scraper, and the horse is then well rubbed down, and, when dry, thoroughly groomed. This is a useful practice, as it aids in cleaning the skin thoroughly, provided the animal is well rubbed down and groomed on returning to the stable. At the same time, it is not absolutely necessary to carry it out. Some also advise the washing-down of horses that have been singed immediately after the operation has been performed; but this practice is not a good one, because not only is the horse needlessly exposed to catching a chill, but washing also removes the oil in the coat, and renders it dry and harsh.

The reduction and shortening of the coat by means of singeing is often thought to be a better plan than to do so by clipping; but, so far as the effect on the horse is concerned, there is little to choose between these two methods, and we may employ either the one or the other, according to which is found to be the more suitable under the circumstances obtaining in each particular case.



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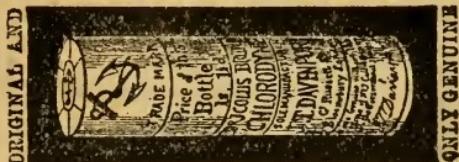
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